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*Delivered before the Massachusetts Society for Promoting Agriculture,
at the Brighton Cattle Show, October 20th, 1830. By JOHN C.
GRAY, Esq.*

IT is with great diffidence, my friends, that I now address you. This duty has hitherto been discharged by men distinguished at once as theoretical and as practical farmers, able not only to display in impressive language, the immense importance of Agriculture, but to convey to their audience much valuable practical information. I cannot pretend to follow in their footsteps. My experience in Agriculture is comparatively recent, and my pretensions to the name of an accomplished farmer extremely moderate. But I trust that I yield to none in my zeal for the best interests of this great art; and having been requested by my associates to make some remarks on topics connected with the business of this day, I have not felt at liberty to refuse so to do, though I can offer you nothing better than a few general and desultory observations.

You well know, my friends, that Agriculture is the most ancient of arts, unless, perhaps, we should consider the mechanic arts as coeval with it. You are equally aware, that in our country, at least, it has ever been considered one of the

most respectable of human avocations. It has always numbered among its votaries many of our most distinguished citizens. It has formed either the chief business or the favorite recreation of all, or almost all, those whom the people of this nation have elevated to the highest office in their gift, and your minds will naturally revert to a distinguished instance within our own commonwealth of the zeal, the steadiness, and ability with which this pursuit has been followed, amidst the successive and pressing avocations of the bar, the bench and the chair of state. But it is only within a short period, that Agriculture has held the rank in public estimation, and engrossed the share of public attention, due to its immense importance. While the great interests of commerce and manufactures have occupied, at different periods, much of the time and thoughts of our national and state legislators, the improvement of our Agriculture was left for a long time to the detached efforts of individuals. The Massachusetts Agricultural Society was founded as early as the year 1792; but for several years it stood alone in the commonwealth, it received no patronage from our Legislature, and its efforts were far less conspicuous, and less effective than in later times. Notwithstanding the number and respectability of those who composed it, it was in every sense of the word a private, rather than a public association. It was not till nearly ten years after, that a second society was incorporated. The honor of introducing into this state those important engines of Agricultural improvement, Cattle Shows — and a high honor it is — belongs to the county of Berkshire, where the first Cattle Show was held in the year 1814. The first Cattle Show held at this place was in October, 1816. At present, there is not a county in the state without its Agricultural Society, and its Cattle Show, with the exception of the county of Norfolk, and of the four counties of Suffolk, Barnstable, Dukes and Nantucket, which consist, principally or wholly of maritime towns.

I need not say how great are the improvements, which, since the establishment of these societies and shows, have taken place

in every branch of our Agriculture. To give a complete history of those improvements, to draw an exact parallel between the Agriculture of Massachusetts as it now is, and as it was previous to our last war, would be, indeed, a most interesting task, but it would be unsuited to the narrow limits of this occasion, and is worthy far abler hands than mine. I shall, therefore, merely state a very few facts, in relation to one description of improvements, which, while they are among the most important, are also the most obvious to the general observer; I mean the changes which have taken place in our *domestic animals*. The most striking of these, is the entire revolution which has been effected in our *swine*. A few years ago our state was disgraced by a tall raw-boned race of these animals, who seemed formed, as has been observed by a great poet, of some of our own species, merely to consume the fruits of the earth. This breed bears a great resemblance to the Gloucestershire breed of Great Britain, which is supposed by the best English writers on Agriculture, to have once prevailed throughout that island, and we may therefore infer, that the two breeds are in fact derived from the same source. This most unprofitable description of stock is almost expelled from the commonwealth, and we trust will soon be numbered with the things that were. Its place is supplied by animals of a far different kind, whose superiority is obvious at the very first view. But though we all know that a material change has taken place, few of us may be equally aware of the profit which it has produced to our commonwealth. This was estimated by the most competent judges several years ago, at not less than one hundred thousand dollars per annum, and is now probably considerably larger, as the change at that time was much less entire than at present.

The improvements which have been produced of late years in our *sheep*, by the introduction of the Spanish and Saxon races, will appear to be of far greater consequence, especially when we consider the immense and increasing importance of our woollen manufactures. The whole number of sheep in New England is in all probability not less than 3,600,000, of

which nearly the whole are either of the foreign or mixed breed. It is believed by our most intelligent and experienced dealers in wool, that the value added to this product, by the introduction of the above mentioned races, may be safely estimated on an average, at one third of a dollar per fleece. Consequently New England has gained in the increased value of this staple nearly twelve hundred thousand dollars per annum, which, to avoid all danger of exaggeration, I put down at one million. A million of dollars added in a few years to the annual revenue of New England, by the improvement of only one branch of her Agriculture !

The improvements which have lately taken place in our *horned cattle*, may be less striking than those which I have already stated. In the first place, as these are animals of much slower growth than sheep or swine, a longer course of years is required to render any improvements extensive or perceptible. Secondly, the necessity of improvement, though great, was less urgent and manifest in this case, than in those before mentioned. Our native breed of cattle, commonly so called, is supposed to be derived from the Devonshire stock, which is held even now in high estimation. The individuals of this species of animals brought over by our forefathers, were probably among the best then existing in Great Britain. The first settlers of Massachusetts Bay, were in many instances men of large property, as well as great intelligence. I find in a history of New England written as early as the year 1652, a statement of the expenses incurred by those settlers, for the transportation of themselves and their effects, up to that period. From this it appears that the transportation only (exclusive of the price) of their domestic animals, cost them twelve thousand pounds sterling. It does not seem probable, that when called upon to incur so great an expense for the mere freight of animals, they should have neglected to select those of a good quality, inasmuch as any others could hardly be worth the carriage. However this fact may be, it is certain that we have long possessed in this state a race of cattle highly respectable, containing many in-

dividuals which would compare advantageously with the finest animals of this description in any country. Still I am warranted by the opinions of the best judges in asserting, that a marked and important improvement has taken place in this, as well as in other descriptions of our domestic animals, since the introduction of agricultural societies and shows. I shall not agitate the much disputed question, whether this result be owing in any degree to the introduction of fine cattle from abroad. It is enough for my purpose, that the result itself is unquestionable, and that it is the effect of an increased care in the selection of animals for breeding. Now let it be recollected, that a considerable part of Massachusetts is essentially and unchangeably a grazing country — that beef cattle constitute the great staple of most of our interior districts, and form a large portion of the remittances made by the country to the sea coast, in exchange for the articles of use and of luxury which are drawn from thence. It appears by a statement in the *New England Farmer* in 1828, that the value of cattle sold at Brighton, principally or wholly for slaughter, in a little more than two months, amounted to about \$540,000. These two months were, it is true, the busiest in the year, but after all proper allowance for this circumstance, I think we may safely estimate the value of the horned cattle sold annually at Brighton, at a million and a half of dollars. When we consider, in addition, the immense importance of the products of our dairies, it must be acknowledged, that too much consequence cannot easily be attached to the improvement, to a still higher degree, of our breed of cattle, nor too much praise awarded to those who have so faithfully, and thus far so successfully, devoted their attention to this object. There is one improvement in this description of animals, which I notice more particularly, because I believe it to be peculiar to New England, and consider it as one of her chief glories — I mean that which has taken place in her working oxen, whether employed in draught or in ploughing. The ox has been denominated by one of the most distinguished and best of men, Dr Watts, *our fellow laborer*, and the appellation

is as true as it is beautiful. Yet how long was it, before we rendered full justice, to the merits of this humble but powerful auxiliary. His meekness, his steadiness, his capacity of enduring severe labor and subsisting on coarse fare, were indeed too striking to remain concealed, but it was for a long time supposed that these good qualities were in a great degree balanced by the extreme tardiness of his movements. A proper attention to his training has convinced us how much this supposition was founded in error, and we may now boast a race of working oxen, which for the despatch, neatness, and efficiency with which they perform their labor, are certainly not surpassed, and most probably not equalled in any part of the world. Such, my friends, are a very few of the improvements which have taken place in our Agriculture, since the establishment of our agricultural societies and Cattle Shows. In what way these societies and shows have contributed to these improvements, is a point which has been so fully and ably handled in this place on former occasions, as to leave little room for any farther illustration. Indeed, I think a candid mind will require little other proof of the advantages resulting from Agricultural Societies, to the great farming interest of this state, than that which can be drawn from their very existence. Twenty years ago there was scarcely a County Society in this Commonwealth. At present, these societies exist, with scarcely an exception, in all our farming counties. Whence this increase? Was it owing to a sudden impulse of popular feeling? No, for these societies rose into being in gradual succession. Can it be ascribed wholly or principally to the encouragement afforded by the commonwealth? That encouragement is highly creditable to the liberality of the Legislature, for it has proved amply sufficient to effect the desired object, and has been uniformly given with a promptness, which evinced that more would have been done, had more been necessary. But the sum which any society can receive annually from the treasury, is limited to an amount equal to the revenue derived by such society from its own funds, and can in no case exceed six hun-

dred dollars. This bounty, liberal as in fact it is, manifestly furnishes of itself a very inadequate motive for the establishment of an Agricultural Society. Consider too the character of the people among whom these institutions have sprung up. It is among the farmers of Massachusetts, a race not given to change, men proverbially and wisely cautious, holding on to their settled opinions and habits with a grasp, which yields to nothing but the force of cogent reasoning. To what else then can we ascribe the multiplication of these societies than to the existence among our intelligent farmers, of a general, a deliberate, and may we not add a just conviction, of their utility? There is, however, one objection to these institutions, which though it prevails much less extensively than formerly, yet still retains its hold on many worthy minds, and is much oftener felt than avowed. It is said that Agricultural Societies and Shows merely furnish an opportunity for theorists to display their fancied discoveries, and that their existence is of little importance or benefit to the practical farmer. My friends, no one respects more than I do the intelligent practical farmer, if indeed any one can be an intelligent farmer, without some degree of theory. No one is better convinced, that more is often learned from a few shrewd remarks from such an individual, or from a single day's observation of his course of farming, than from volumes of essays, and hours of declamation from a mere theorist in agriculture. No one is more aware, that there have been, and now are among our farmers, men gifted with talents of the highest order, which would have raised them to distinction, had such been their object, in any walk of human industry. But it is for this very reason, that I would uphold Agricultural Societies and Shows. For, let me ask, what becomes of the sterling wisdom of these practical men? Something of it may be communicated to their children or their immediate neighbors, but the greater part goes down with them to the grave. 'Certain it is,' says an ancient sage of the law, 'that when a good lawyer dieth, much learning dieth with him;' and the remark

will apply with equal truth to the skill and information of the good farmer.

My friends, I would arrest this valuable information before it passes away. I would induce the possessor of it to visit our shows and contend for our premiums! I would have it communicated by his conversation and simple statements, to our societies and through them to the public; I would have it brought into the great channel of intelligence, the press, and diffused throughout the whole community. The mere writer of agricultural essays has no need of societies and shows. His facility of composition enables him to place his thoughts on paper in the solitude of his library, and the press is always open to his effusions. But if we would render the intelligence and experience of the true practical farmer either properly creditable to himself, or properly beneficial to his fellow-citizens, I know of no means by which it can be so well effected, as by those which I have mentioned.

My friends, I have spoken of the benefits which have resulted to the *Agriculture* of our state from the establishment of Agricultural Societies and Cattle-Shows. But I believe we should do great injustice to the subject, if we confined our attention to this class of benefits only. There are others of a political or rather moral nature, of no mean importance. The youngest of us may remember the time, when this commonwealth was divided into political parties by questions of the most momentous and most exciting character; when the contest was carried on between those parties with the activity, the determination and fervor, which might have been anticipated from their nearly equal forces, from the general intelligence of those who composed them, and from the importance of the subjects in dispute. Men, who personally respected each other, were ranged on opposite sides in battle array, and many hard thoughts were entertained, and many hard words exchanged, which were deeply regretted when the season of excitement had gone by. These times have happily passed away, but our community still is, and always will be, divided on questions less exciting per-

haps than those which once existed among us, but still highly important and interesting. And yet, my friends, we nowhere find the slightest vestige of party spirit in the proceedings of this, or of any Agricultural Society. So may it ever be, so we may pronounce after our past trying experience, will it ever be.

In Agriculture we shall ever find a subject of harmonious interest, and how consoling is the thought, that however we may contend elsewhere, here at least we shall be at peace; that here is one topic which can divide the opinions without severing the friendship of good men — one green spot where the demon of party violence can never intrude — one most interesting object of human inquiry which we can investigate and discuss with all our heart and soul, not only without forgetting, but without being tempted to forget, that we are brethren. Yes, my friends, if ever all lines of party division fade away — if we ever realize that we are all of one blood, nourished at the bosom of one common mother, it is when the interests of Agriculture are in question.

But it is not political prejudices alone, which Agricultural Societies have tended to suspend and soften. They have done much to alleviate others equally dangerous at least — I mean those of a local nature. In this respect more has perhaps been effected by the Massachusetts Society, than by any other in the commonwealth, not from any superior merit in its members, but simply from the force of circumstances. Owing to the manner in which it is composed, and the situation of the place where its Shows are held, it has served as a connecting link between the city and the interior.

To you, my friends, I need not say that the interests of these great portions of our community are one, and that any jealousy on either side is as impolitic, as it is illiberal. I believe that this important sentiment is constantly gaining ground, that if impressions of an opposite kind exist anywhere, they are founded in misconception, and are rapidly passing away. This is indeed a *pleasing* opinion, but it may be entertained on far better grounds. Every day's observation convinces me that it

is not a grateful error but a sober truth. Now what can better promote harmonious feelings between different portions of the state; what can more tend to strengthen, diffuse, and perpetuate them, than that friendly interchange of sentiments, upon subjects of deep and immutable interest to us all, which results necessarily from Agricultural Societies and Shows? He must be singularly inexperienced or singularly unobserving, who has not seen how often a little personal intercourse, or a word in season has caused the grossest misconceptions and prejudices to vanish, like the morning cloud, and if this society has conferred any benefits on the public, that to which I am now referring is certainly one of the greatest.

Permit me now, my friends, to submit to you a very few practical suggestions. The first relates to insects. These are evils to which our Agriculture is presumed to be more exposed, than that of any portion of the Old World.

These animals are probably bred in most cases in our vast forests, and as they are driven out from their ancient haunts by the progress of cultivation, descend in countless armies upon our fields and our gardens. Whatever be their origin, their prowess speaks but too well for itself. The beautiful and active Beetle which attacks the Locust tree, a tree combining rapidity of growth, with hardness of wood to a most singular degree, this insect I say, has robbed our country of valuable timber to the amount of millions of dollars.

The Borer which mines into the solid trunks of our Apple trees, and the Canker-worm, which consumes their foliage like a flame of fire, are equally destructive, within the circle of their ravages. It is true that our efforts to extirpate these minute but powerful enemies, as well as others of a similar description, or even to check them to any considerable degree, have hitherto been almost unavailing, but the object is one of the utmost importance, and should not be relinquished till the greatest research and exertion have been exhausted.

The next suggestion which I shall offer, relates to the cultivation of delicate fruits and of ornamental flowers. These are delicious luxuries ; but in the first place they are innocent and salutary, and in the next they are within the reach of the great mass of our agricultural community. The farmer who possesses a moderate competency, may cover his table and decorate his house with fruits and flowers of the highest degree of flavor and beauty, in a state of freshness and perfection, in which they are seldom enjoyed by the most opulent inhabitants of the city. And all this with a small expense of time and exertion. A little attention in the right place, a due vigilance in improving the fleeting opportunities of time and season which nature offers us, a proper degree of minute, but light and interesting labor, and the business is done. I should say more on this topic, had it not engaged the attention of a kindred society, whose efforts, thus far, have been crowned with a success beyond all expectation.

The last point which I submit to your consideration, is the preservation and culture of our forest trees. My friends, in this respect, if in no other, we have indeed a goodly heritage. It is stated by the highest authority on such subjects, F. A. Michaux, 'that the number of sorts of American forest trees, whose growth amounts to thirty feet at least, is not less than one hundred and thirtyseven, of which ninetyfive are employed in the arts ; while in France there are only thirtyseven which grow to that height, of which eighteen only are found in their forests, and seven only of these are employed in civil and maritime architecture.' We are fast consuming these rich treasures of our woods, and I fear that our prodigality will be followed at no distant period with the usual consequences of prodigality in other cases. Fuel has already become scarce in our seaports, a subject of serious consideration to those who reflect, that the sufferings of the poor in this country are probably greater from the want of this article, than from all other causes united.

The valuable timber, also, on which we depend for our domestic architecture, and for our public and our mercantile marine, is rapidly passing away without any earnest or extensive efforts to reproduce it. The live oak of our southern states, considered the best material in the world for ship-building, will probably be entirely swept away in half a century, and our own white oak may follow, after no very long interval. Independently, however, of all considerations of utility, the culture of our finest forest trees merely as majestic ornaments to the face of our country, well deserves our utmost care.

What can be a more noble object for instance, than one of our full grown American elms, a tree denominated by the high authority already quoted, 'the most magnificent vegetable production of the temperate zone.' Where can we behold a more striking union of strength and grace than in its massy trunk and drooping foliage? What is there in the most classical specimens of architecture in our city, beautiful as indeed they are, to which the eye turns with more pleasure, than to the triple row of elms which adorns our Mall? Who has ever contemplated those solid colonnades and shady arches, without grateful feelings towards the unknown individual to whose taste and wisdom we owe them? Who doubts that his name, had he chosen to record it, would have been far better perpetuated by such a memorial than by the proudest monument of brass or marble.

My friends, is there not something elevating in the thought, that we can thus contribute to the happiness of generations yet unborn, that we can thus imitate, in some humble measure, the comprehensive benevolence of that Providence which plans, not for years, but for ages.

The season which is just closing, my friends, has been uncommonly propitious. We have been exempted from all visitations of drought, and have enjoyed a succession of seasonable rains, to a degree seldom experienced in our bright and dry climate. Our fruit trees have borne with unusual abundance;

our crop of Indian corn is good, and that of potatoes whether we regard quantity or quality, uncommonly fine.* Above all, our grass, a product of more importance to this state than all other products united, has proved, for the fourth year in succession, remarkably luxuriant. This abundance has been attended, as might have been expected, by a diminution in the market value of hay, but it should be recollected on the other hand, that our farmers have been enabled to retain and rear much valuable stock, which must have been sacrificed in a dry season.

It is true, that within the last two years, our manufacturers and merchants have been visited with severe trials, and that our farmers have not been wholly exempted from the weight of the depression under which the rest of the community have labored. But such a complete exemption could not be expected in a country, where the great interests of Agriculture, Manufactures and Commerce, are so intimately united, as in ours. It may safely be affirmed, however, that our farmers have suffered far less from the evils to which I allude, than any other large or important portion of our people, and this from the very nature of their calling. The merchant or manufacturer may be robbed of the reward of his labor, by changes in the foreign or domestic market entirely beyond his control, and may wind up a year, in which he has done everything which intelligence and industry could do to insure success, not only without profit, but with an actual diminution of capital. The strong arm of mechanic industry may be enfeebled or paralyzed by the prostration of those manufacturing or commercial interests to whose existence it so essentially contributes, and on whom in turn it so essentially depends. But what has the intelligent and industrious farmer to fear? His capital is invested in the solid ground, he draws on a fund which from time immemorial has never failed to honor all just demands, his profits may be diminished indeed, but never wholly suspended; his success de-

* I have since been informed that this last assertion is not universally correct, and that in many places the crop of potatoes is deficient in quantity.

pende on no mere earthly guarantee, but on the assurance of that great and beneficent Being, who has declared that while the earth endureth, seed time and harvest shall not cease.

I shall close with a few remarks on the immediate business of this meeting, the distribution of prizes. It is obviously a difficult and delicate task, to decide between the claims of competitors deeply interested in the result, and of nearly equal merits. The labors of the trustees in this part of their duty, have been greatly alleviated on the present, as on former occasions, by the assistance of those intelligent and respectable individuals, who have consented to be associated with them on committees. It has ever been the desire and aim of those committees to arrive in each case at a just decision, and it is gratifying to reflect, that their exertions to this end have always been duly appreciated. Whatever may have been said, sometimes doubtless with justice, of their *errors*, I am not aware that their impartiality and fairness have ever been impeached. We entertain the fullest confidence that the decisions now to be announced, will be received by the public in general, and by the unsuccessful competitors in particular, in the same fair and liberal spirit which has been manifested on all former occasions.

COMMITTEES OF THE BRIGHTON SHOW.

EXECUTIVE COMMITTEE.

Benjamin Guild,
Israel Thorndike, Jr.

ON FAT CATTLE.

Gorham Parsons, *Chairman*,
Col. Bethuel Penniman.
Abner Wheeler.

COWS, HEIFERS, BULLS, AND BULL
CALVES.

John Welles, *Chairman*.
Nathan Adams, Jr.,
Capt. George Smith.

SHEEP AND SWINE.

John Heard, Jr, *Chairman*,
Col. Samuel Jaques,
Thomas Williams.

PLOUGHING WITH TWO YOKE
CATTLE.

John Prince, *Chairman*.
John Northend,
Ebenezer Heath.

PLOUGHING WITH ONE YOKE
CATTLE.

E. H. Derby, *Chairman*.
Col. Adams,
Timothy Corey.

WORKING CATTLE.

Luke Fiske, *Chairman*.
Gen. Aaron Capen,
Samuel Brooks.

MARSHALS.

Capt. Isaac Cook,
Capt. William Prentiss,
Col. Wm. H. Spooner,
Col. John Tyler.

MANUFACTURES.

Richard Sullivan, *Chairman*,
Robert Waterston,
Joshua Clapp.

INVENTIONS.

Gorham Parsons, *Chairman*,
Daniel Treadwell,
David Moody.

BUTTER, CHEESE, AND CIDER.

Benjamin Guild, *Chairman*,
John C. Gray,
Israel Thorndike, Jr,
Isaac P. Davis,
Benjamin Pollard

GRAIN, VEGETABLES, CROPS, &c.

Peter C. Brooks, *Chairman*,
William Prescott,
James Jackson.

FARMS.

William Prescott, *Chairman*,
Peter C. Brooks,
John Welles.

AUCTIONEERS.

Samuel F. Coolidge,
Richard Warren.

OFFICIAL REPORTS
OF THE COMMITTEES OF THE
MASSACHUSETTS AGRICULTURAL SOCIETY,
AS ANNOUNCED AT THEIR ANNIVERSARY
HELD AT
BRIGHTON, OCT. 20th, 1830.

REPORT OF THE COMMITTEE ON FAT OXEN.

The Committee appointed to award Premiums on Fat Oxen, have attended the duty assigned them and Report as follows:

To Dexter Fay of Southborough, County of Worcester, they award the first premium for his fat ox, six years old, from Imported Bull Holderness, weight of ox 2477 pounds, \$25.

To Simon Ward of Charlton, County of Worcester, the second premium for one of his fat oxen eight years old, from Imported Bull Holderness; the ox to which the premium is awarded has the most white on the back; weight 2312 pounds, \$20.

To Asa Rice of Boylston, County of Worcester, the third premium for his ox seven years old; weight 2380 pounds, \$10.

Evidence was produced of the manner of feeding, and the expense of fattening the cattle, which was satisfactory to the committee.

Joseph Estabrooks of Royalston, county of Worcester, entered for exhibition only, a pair of very fine and well fattened oxen, they were not raised in this state, and therefore not entitled to premium by the rules of the society, but were highly

estimated by the committee, they were six years old, and the pair weighed 4634 pounds.

Henry Chapin of Waltham, entered for exhibition only, a pair of oxen from imported Bull Denton, and Cows of the Teeswater or short horn breed; they were very handsome, fine turned cattle, five years old, in prime condition, and raised by Theodore Lyman, Esq. of Waltham.

Silas Billings of Hatfield, county of Hampshire, entered a pair of well fattened oxen — but the committee had but three premiums to award.

Samuel Bowen of Adams, county of Berkshire, entered for exhibition only, a pair of handsome well shaped oxen; and when the manner of feeding on hay and grass only, which was stated to the committee were taken into view, they were considered in very good condition.

Jacob W. Watson of Princeton, county of Worcester, entered for exhibition a fat cow, which attracted attention.

William Winn of Burlington, county of Middlesex, entered for exhibition a pair of twin oxen, Cœleb's stock; they were well formed cattle and in good condition. The committee were much pleased with the exhibition of fat cattle, and think it equal, if not superior, to the best that has been made since the first establishment of a Cattle Show in Brighton.

All which is submitted by

GORHAM PARSONS, BETHUEL PENNIMAN, ABNER WHEELER,	}	<i>Committee.</i>
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BRIGHTON, OCT. 20th, 1830.

The pair of young oxen, sent by Theodore Lyman, Esq. for exhibition only, were remarkable for their fine symmetry and just proportions.

REPORT OF THE COMMITTEE ON COWS, HEIFERS, BULLS
AND BULL CALVES.

The Committee on Bulls, and Bull Calves, Cows and Heifers, were gratified to perceive the improvement in the value and appearance of the stock exhibited this year at the Brighton Cattle Show. The number of fine animals, with the spirit manifested by the great assemblage of Agriculturists, are pleasing indications of the improvement which excitement and honorable competition will effect.

True it is that imported animals of great name do not call crowds round a pen as was once the case — nor are fine animals so rare as in years past.

But your committee think that our discerning farmers will be gratified to notice the advanced grade in the improvement of stock.

They will be pleased and led to useful practice by observing that not only from the imported breeds of cattle is an obvious benefit derived — but their Report will show that a judicious selection of native stock is moving forward in equal progress, and to like advantage.

Craving indulgence for these observations, which seemed due to the occasion, your committee proceed to announce the premiums, which they award as follows.

BULLS.

The committee award the first premium on bulls, to Mr. G. W. Watson, of Princeton, for his young bull one year and five days old. \$30.

This was a cross from the imported breed, and a beautiful animal, weighing 987 lbs. It will be seen that he but little exceeded the age proposed for bull calves.

But the committee were governed by the letter of the rules, and hope the distinguishing proportions of this animal may be retained as his figure enlarges.

The second premium they award to Mr Peter W. Page, of Shirley, \$20, for his bull nineteen months old, weighing

1160 lbs. partly of the short horned and partly of what is called the Westminster breed, so remarkable for the fleshy hind-quarter, and said originally to have been of foreign derivation. This animal was of good size, figure and proportion, and may be exported to reward Mr Page's attention to stock.

To Mr Asa Rice, of Worcester, the third premium, \$10, for a fine bull two years and five months old, a cross of Holderness or native stock. The beautiful color and hair of Holderness, with many approved qualities are remarked in his descendants.

The committee recommend a gratuity of ten dollars to Mr Abraham Washburn, of Bridgewater, for his fine white bull, two years and seven months old, weighing 1498 lbs. This animal was of large growth, good figure and well tempered, with many marks of imported blood.

He was a cross from that fine animal Denton. With the opinions of dislike held by our countrymen, it is to be regretted that the short horned stock so often incline to this color.

Having been driven in a short time to the Show, this animal appeared to less advantage.

There were several bulls exhibited for premium deserving of commendation.

Mr George Morse, of Roxbury, exhibited one which excited the attention of the committee. He was a cross from Admiral and a valuable animal.

For exhibition the Show was indebted to Mr Thomas Williams, of Noddle's Island for a view of his full blood bull Cicero, 22 months old, of fine figure and promise. Col. Sanger of Sherburne, sent a fine animal of this description.

The Show was in like manner indebted to Mr John Perry, of Sherburne, for a view of many of his high breed.

BULL CALVES.

To Noah Johnson, for his bull calf six and a half months old, weighing 644 lbs. of foreign cross and good appearance, \$15.

There were no other bull calves that were thought to deserve a premium. There was a bull calf of reputed excellent breed for milk, & of the same stock with Mr Saunderson's cow, to which was awarded the first premium.

But though fair to view, your committee did not feel authorized to award a premium. This he may perhaps merit hereafter.

ON MILCH COWS.

To Nathan Saunderson, of Waltham, the first premium, \$30.

This cow was in her origin of imported blood, though not well explained, 6 years old, and had given 20 quarts of milk, and for some months an average of 18 quarts, and from her week's milk 14 lbs. of butter had been made.

To Leander Hosmer, of Bedford, the second premium, \$20.

This cow's milk made 14 lbs. of butter a week, and satisfactory evidence was given of her being a very productive animal; of native stock.

To John Ballard, of Framingham, the third premium, \$15.

This was a well formed animal, and of valuable milk qualities. She had for several months yielded over 12 lbs. of butter a week. Her stock was mainly native.

Other fine stock was exhibited for premium. A cow of Mr Aspinwall, of Brookline, was much admired and deservedly so; her figure was beautiful, and her product might perhaps have equalled that of any other animal exhibited at the Show; but an excessive feed on apples reduced her milk soon after calving. For some days she gave at the rate of 13 lbs. of butter a week. She is said also to be in milk nearly all the time, and the committee doubt not that under other circumstances this animal may hereafter receive a high premium.

Mr Saunderson, Jun. of Waltham, Col. Metcalf, of Cambridge, Mr Wyman, of Shrewsbury, Mr Adams, of Newton, Col. Taylor of Quincy, Mr Bemis, of Waltham, and Mr Sanborn, of Charlestown, either for premium or Exhibition added to the merits of the Show.

HEIFERS IN MILK.

The 1st premium to the Rev. Henry Colman, of Salem, \$15.

This extraordinary heifer was of native stock. She calved 2d of Sept. last, and had given at some time when measured, 16 quarts in a day. But it would seem the quality of her milk must be superior, for in ten and a half days there was had therefrom $18\frac{1}{2}$ lbs. of butter, and at other times on trial, 14 lbs. of butter a week. Most of this appears by the certificate of her former owner Mr L. Hazelton, Jr, of Haverhill.

The second premium to Seth Davis, of Newton, for a native heifer, 28 months old of great product and promise.

HEIFERS NOT IN MILK.

The 1st premium to Samuel Fisk of Saugus, for a beautiful heifer out of Bolivar, \$12; her age was 8 months 5 days, weighing 584 lbs. and of fine figure.

The second premium to Mr William Furness of Medford, for his native heifer, \$10. Its age was 7 months and 3 days — its weight 519 lbs. This animal did justice to the care taken of it, and promised to reward it.

To John Prince, Esq. of Roxbury, the 3d premium, for his heifer, \$8. This handsome heifer was of the short horn breed principally, with somewhat of the Bakewell and Alderney blood.

To Mr Thomas Williams, for his heifer from Cœlebs, called Isabella, the 4th premium, \$6. This was a high bred heifer, and wholly of imported blood.

There were many heifers that were ornamental to the pens both for premium and exhibition.

Hon. Luke Fiske, of Waltham, Stephen Higginson, Esq. of Cambridge, Mr N. Brown, of Waltham, Capt. Mackay, of Weston, Mr Watson, of Princeton, Mr Bemis, of Waltham, Mr Dudley, of Brighton, Mr May, of Roxbury, Mr Phillips, of Lynn, Mr Swift, of Newton, and Mr Williams, of Noddle's Island, (in

a fine heifer from Bolivar,) with others, gave many good instances of the improved condition of our stock.

The productiveness of the Milk animals in fact appeared to your Committee to exceed what has formerly been exhibited. Of the improvement in the handsome show of heifers mention has been made. Of the Bull, there were some fine specimens; of calves there were few, and one premium only was awarded. This is not so much to be regretted, as these animals are generally so loaded with fat as to make it difficult at so early an age to decide on form or properties.

All which is submitted.

JOHN WELLES,
GEORGE SMITH,
NATHAN ADAMS, Jr. } Committee.

REPORT OF THE COMMITTEE ON SHEEP AND SWINE.

The Committee, who were appointed to award premiums upon Sheep and Swine, have attended the duty assigned them, and request leave to state —

That they proceeded to the discharge of their duty, by first visiting the pens in which the swine were, and they found them well filled; and after a careful and thorough examination of their several points, qualities and properties, they awarded

To John Mackay for the best boar	\$12
“ “ “ next “	8
“ “ “ best sow	12
“ “ “ next “	8
“ Isaac Robbins for the next best sow	5
“ John Mackay for the best pigs, not less than two in number, nor less than four months old, nor more than eight	10
“ Isaac Robbins for the next best	5

They then visited the sheep pens, and were much gratified to find in them several lots of Dishley or New Leicester breed of sheep. One fine ram and three ewes belonging to Enoch Silsby, of Boston, of pure blood, imported from England.

A buck lamb, six months old, belonging to John Prince, of Roxbury, from the superior Dishley ram of Col. S. Jaques, and two ewe lambs 6½ months old, from imported stock.

Two Dishley ewes and two yearling rams, belonging to Thomas Williams, of Noddle's Island. They were from the imported ram of Col. S. Jaques, who obtained the Society's premium the last year, and was presented this year for exhibition. The committee were not insensible of the responsible and delicate situation in which some of its members were placed to discharge their duty satisfactorily, but after a minute and close examination of the sheep, their form, shape, size, and other peculiar properties, they unanimously award

To Enoch Silsby for the best Dishley ram	.	.	\$30
“ “ “ “ ewe	.	.	30

And it is with great pleasure the committee observe the attention of gentlemen turned in favor of the Dishley Sheep. They consider them an important and valuable acquisition to the country, and among the farmer's best stock. They will yield more profit than other sheep from the fleece, and their carcass is remarkably well calculated for the market.

There were two pens filled with native wethers. One lot was owned by E. T. French, of Milton; and the other by P. P. Peirce, of Lexington. Some of those that were offered by Mr Peirce, were large and in good condition, but there were not a sufficient number of such extraordinary quality as to justify the committee to award the premiums.

JOHN HEARD, Jr,	} Committee.
SAMUEL JAQUES,	
THOMAS WILLIAMS,	

Specific character of the Dishley or New Leicester breed of sheep. Heads clean, straight and broad; bodies round, or barrel shaped; eyes fine and lively; bones fine and small,

pelts thin; wool long and fine, well calculated for combing, and weighing upon an average eight pounds per fleece, when killed at two years old. Fatten kindly and early, well calculated for market, thriving in pastures that will scarcely keep other sheep, and requiring less food than others. Tolerably hardy and vigorous.

REPORT OF THE COMMITTEE ON PLOUGHING WITH TWO
YOKE OF OXEN.

The Committee on the Ploughing Match with two Yoke of Oxen, report—

That eleven ploughs were duly returned for *this* match, (a greater number than were ever before entered at Brighton,) that on calling the list at 9 o'clock, thirteen ploughs were offered for competition, but as only 11 lots were assigned, the two last on the list were under the necessity of retiring from the contest.

After a most careful examination, the committee unanimously awarded the first premium to Abiel Wheeler, of Concord

Abiel Wheeler, of Concord, as ploughman	8	
Jacob Jepson, driver	4	
2d premium, Samuel Hoar, 2d, of Lincoln	10	
“ as ploughman	5	
Franklin Wheeler, driver	3	
3d premium, G. M. Barrett, of Concord	6	
“ as ploughman	3	
Ira Fisher, driver	2	
		\$56

The shortest time occupied by any team was 30 minutes;
longest time “ “ 41½ “

Greatest number of furrows to any lot was 21
Fewest “ “ “ 17

except the lot No. 1, being about a *rod shorter* than the rest from the shape of the field, required to be a little wider, and 23 furrows were made — the size of the lots were 20 rods long and 20 feet wide, making about 24 rods to each.

Every plough used was of Cast Iron, and were chiefly of *Tice's* make (all that obtained premium were of his patent ;) the whole work was excellently well performed, and much difficulty was experienced in selecting for the *three* premiums; the committee would gladly have had it in their power to have awarded *eleven*.

It seems necessary to give their reasons for deciding as they did, and the rules they established — which were, that cattle should not be *hurried*, as *goodness of work* was the object, to be ploughed not less than $5\frac{1}{2}$ inches deep, and the furrow slice to be cut *narrow*, and laid as *flat* in it as was possible — the reason of the committee was this, that in *this* part of our country very little land is cultivated in *winter grain*, and the object of *fall* ploughing, is to have the sward rotted for spring cultivation, which they think best effected by this mode; as if laid on edge, and so left till spring, much grass comes up in rows in the hollow of the furrows — and on the *flat* method it is all equally covered, and no grass grows.

The committee well know that in England, (and probably in our own country, where winter grain is cultivated on *sward* land) they adopt the *ridge* furrow slice, as by this means, in broadcasting their seed, it naturally falls into the lowest part of furrows, and then by harrowing, the seed is deeper covered, and comes up in *rows* as they wish, giving a better chance for a free circulation of air in its after growth, and to clean, by hoeing if they wish, and also probably some saving of seed — having nearly the same effect as sowing by drill machine.

The first ploughing match planned in the United States, was at Brighton, in October, 1817. At that match, *not one cast iron mould board plough was in our vicinity, if in the state* — and at the present Show *none but of cast iron* were in our match.

This shows in the clearest possible view, the immense improvement that our Cattle Shows, and particularly the ploughing matches, have produced in this most important Agricultural Implement.

Respectfully submitted by

JOHN PRINCE, EBEN. HEATH, JOHN NORTHEND,	}	Committee.
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REPORT OF THE COMMITTEE ON PLOUGHING WITH ONE
YOKE OF OXEN.

The Committee, consisting of E. HERSEY DERBY, DANIEL ADAMS, and TIMOTHY COREY, to whom was assigned the *Ploughing Match with one Yoke of Cattle*, Report—

That the land to be ploughed was divided into lots of about 24 rods each.

There were eleven competitors for the premiums. The ploughs generally of the improved kinds, and four of them were without drivers.

As the principal object of the ploughing match was to show good work, and skill in the ploughmen, they were particularly directed not to hurry their cattle,—shortness of time being no object in comparison with good work,—that attention would also be paid to the appearance, and docility of the cattle, and the management of the driver. The ploughing to be not less than five inches deep, and that narrow furrows, laid lapping on each other, would be preferred to wide and flat ones.

Under these regulations, the first lot was ploughed in 33, and the last in 46 minutes.

The committee state with great pleasure, that the work in every instance was of a superior order; that there was so little difference in most of it, they found it extremely difficult to decide to whom they should award the premiums. After great deliberation, they award as follows :

1st premium, to Moses Whitney, of Stow .	\$15
G. P. Meriam, as ploughman .	8
Moses Whitney, as driver .	4
	<hr/>
	\$27 00
2d premium, to Otis Meriam, of Concord, aged 17, .	\$10
Same as ploughman .	5
Abel Meriam, aged 11, as driver .	3
	<hr/>
	\$18 00
3d premium, to John Tilden, Jr, of N. Bridgewater .	\$6
E. Dunbar, aged 18, as ploughman .	3
Same as driver .	2
	<hr/>
	\$11 00

E. HERSEY DERBY, *Chairman.*

BRIGHTON, OCT. 20, 1830.

REPORT OF THE COMMITTEE ON WORKING OXEN.

The Committee on Working Cattle, consisting of Messrs LUKE FISKE, AARON CAPEN, and SAMUEL BROOKS, having attended to the duty assigned them, ask leave to report.

Twenty yoke of Cattle were regularly entered for the Society's premiums, and they did much credit to the farmers who offered them.

The committee after trial of their power and training, and a comparison in reference to age, strength, form, equality of match, and other general properties, were unanimous in their awards as follows:—

To Benjamin Woodbury of Sutton, his cattle four years old, first premium,	\$25 00
To Leonard Woodbury of Sutton, his cattle four years old, second premium,	20 00

To Luther Whiting of Sutton, his cattle four years old, third premium, \$15 00

To George M. Barrett, of Concord, his cattle four years old, fourth premium, 12 00

To Henry Barrett, of Concord, his cattle four years old, fifth premium, 8 00

Many other cattle were very deserving and performed well, and in other years would have obtained premiums ; but the superiority of the Show, in this respect, over former years, excluded them.

All which is respectfully submitted.

Per Order, LUKE FISKE, *Chairman.*

BRIGHTON, Oct. 20, 1830.

REPORT OF THE COMMITTEE ON USEFUL INVENTIONS.

The Committee on Useful Inventions report —

That Mr Hale of New York, by J. R. Newell, entered for premium Hale's Patent Pump.—This pump is of continuous rotatory action, the power being applied to a crank. This very compact hydraulic machine combines the actions of the sucking and forcing pumps ; and is even capable of throwing water effectively as a fire-engine ; the arrangement and action of the valves is original and highly ingenious ; the committee, however, forbear attempting a description of these, as they could not be made intelligible without drawings. Perhaps the cost of this pump, compared with that of the ordinary construction, will render its application in some degree limited ; yet the committee have no hesitation in expressing an opinion, that it is superior to any rotatory pump heretofore constructed. As this invention was not made within this commonwealth, and moreover the inventor has omitted to furnish certificates of its actual use, the Committee are restrained by the regulations of the Society from awarding a premium which in their opinion it deserves.

John and Horace M. Pool, of Easton, County of Bristol, entered for premium, several Geometrical Protractors, of a new construction, by which lines may be drawn with great facility, and at any required angle to the side of the tablet or drawing board, which in this case forms a base line; it is therefore a most convenient instrument in forming plans of surveys, an operation of primary importance to the farmer, considering the simplicity of the instrument, and the ease with which it may be applied, the committee award to the Messrs Pool, a premium of \$15 00.

The same gentlemen, the Messrs Pool, presented for exhibition, two steel Drafting Scales and a Drafting Square, the workmanship of which was executed in the best manner and equal to imported articles of the kind.

Amasa Dunbar of Sharon, County of Norfolk, entered for premium a machine for forming Boot Fronts; good certificates of its having been tried and found useful were produced; the workmanship was well executed, and it did not appear complicated or likely to get out of order; but in the opinion of the committee, was calculated for large establishments, and too costly for general use — and they do not award a premium.

Joseph Hutchinson of Dorchester, entered a Dash Churn for premium, but it did not appear to the Committee to be any improvement on the common churn in general use, and do not award a premium.

Daniel Chandler of Lexington, County of Middlesex, entered for premium a Double Harrow, and produced a certificate of its having been used and approved for harrowing among trees, on rocky and uneven ground, and operating in sharp hollows or valleys, when the two sides would rise, and permit all the teeth to come in contact with the earth; the workmanship was good; it was made in the common heater shape, in two parts, divided longitudinally, and hung with two strong hinges in the centre, for the purpose of turning up one half and placing

it on the other, by which means it is made fit to pass in narrow places, between trees, stumps and rocks.—When turned up or doubled over, one half the teeth are not in use. The committee were of opinion that strong handles like those of a plough, passing through the hind bar of the harrow, braced in the same manner as plough handles, answer all the purposes of Mr Chandler's harrow ; with the handles a person could raise up either side of the harrow — raise or depress either end, and make the whole harrow bear on small uneven spots of earth, light it up if the teeth came in contact with a root or fast stone, and generally give a smoother and better pulverized surface to a field. In harrowing in seed the advantage of handles must be obvious to every farmer that makes use of them, or that sees them used ; the double harrow has been in use in England for many years ; hardly a book on Agricultural Implements, but what contains plates of them, not precisely of the shape of Mr Chandler's harrow, not however varying materially. It can be used, the two harrows together, or separate ; and when separated, being lighter, make two teams ; they are readily put together and as readily detached. Therefore the committee do not award a premium.

The preceding entries were all made in season, agreeably to the rules of the Society, and a list containing those entries only handed the committee by the secretary, at the time of their meeting on the 19th, to make the examination. The next day the committee found other articles had been entered and placed in the Society's rooms on that day ; viz. — a Washing Machine, by Mr Shepherd of Watertown ; three Ploughs, by Mr Prouty of Hanover, County of Plymouth, who appears to be only the manufacturer of the iron work ; his certificate, which has many respectable signatures, mentioning its having been, used and approved, has, in the printed caption, Hitchcock's Patent Ploughs, manufactured by D. Prouty. No application by the inventor, so that no question as to premium could have arisen, as regards this entry. A Double Plough, with two moulds of iron and two shares, two sharp lips behind,

on bottom of moulds, said to be made for ploughing between corn, but no person appeared to explain to the committee.

Messrs Nourse & Co. of Sherburne, introduced four Ploughs, but the committee could not perceive any new improvements in their construction. Their certificate stated they had been used and highly approved.

Dr Andrew Nichols, of Danvers, county of Essex, presented two cast iron Harrow Teeth, of a new form differing from any harrow teeth in common use. In a letter to the Trustees, of the 19th, he gives a particular description of these teeth; the superiority over any other in use, with a certificate from a person that had used a harrow with his cast iron teeth, and approved of it highly. The committee will request the Trustees to publish Dr Nichols' letter to them in the New England Farmer, and to cause one of his harrow teeth to be deposited in the Agricultural Warehouse, under the same roof of the New England Farmer Office, for public inspection; but perhaps it may be well for the committee to observe that the entry made by Dr Nichols, for premium, is for his improved harrow teeth, of *cast iron*. The distance of most farmers from iron foundries, the difficulty of renewing the teeth when broken, the loss of time in replacing them, and the probable expense that would attach, would have prevented the committee from awarding a premium, had the regulation prescribed for making the entry, been strictly complied with. All which is submitted by.

GORHAM PARSONS,	} Committee.
DANIEL TREADWELL,	
DAVID MOODY.	

BRIGHTON, OCT. 20, 1830.

The following is Dr Nichols' letter alluded to above.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN — Believing that the harrow might be greatly improved without any increase of expense, I last spring formed a model, and had a set of teeth cast at the Danvers Foundry

which were immediately set in a frame and put in use on my farm in Middleton. They fully answered my expectations in everything but strength, being cast of hard brittle iron, and too slender in that part where the greatest strength is required, *to wit*, the part nearest the stock, which is not supported by it. Several of them were broken among large roots and fixed rocks. I then altered the model and had teeth cast of softer and stronger iron, (Scotch iron) such as are herewith exhibited; none of these have been broken. The projection from behind the point of the tooth is designed to receive a brace, should the strength prove insufficient without one. I have not however found it necessary to brace the teeth of my harrow. The notch near the top is designed to secure the tooth in the frame by a pin, which together with a wedge driven in behind, filling the trough of the tooth, readily secures it, and at the same time leaves it in a situation to be easily taken out and set in a smaller frame for harrowing among corn, &c. With the form exhibited I am well satisfied, believing it combines a good degree of strength with a saving of metal. But very possibly it may still be improved, and as no patent will be taken out for it, every farmer will be at liberty to have it formed to suit himself. Each tooth, at seven cents per pound, costs about 30 cents, — each tooth moves five inches of earth. Eleven teeth forms my harrow, which moves and pulverizes very completely a strip of land 55 inches wide; \$3,30 the cost of the teeth, which is I think much less than the cost of the common teeth for a harrow of this size.

I think it not extravagant to say that with the same ox or horse power, most tillage land may be benefited twice as much as it can be by the use of the common harrow in the same time, and that should even one tooth on an average be broken daily, it would still be the most economical harrow in use. In such a result, however, which is not to be apprehended, it would be cheaper to make them of wrought iron.

Yours respectfully,

ANDREW NICHOLS.

DANVERS, OCT. 19, 1830.

REPORT OF THE COMMITTEE ON BUTTER, CHEESE AND CIDER.

The Committee on Butter, Cheese and Cider at the Brighton Show respectfully Report —

That the only articles offered to them for premiums were Butter and Cheese. That of the several entries, more than one half would not be considered Butter of uncommon excellence, either in flavor, the perfectness with which it was made, or the neatness with which it was put up ; it might be termed very good butter, and a fair sample of what the owners send weekly to market ; there were a few boxes of excellent flavor, pure, hard, and clean in appearance, and packed with great nicety and care.

The 1st premium, is awarded to Michael Crosby,			
of Bedford,	.	.	\$15 00
2d do.	to Nahum Hardy, Waltham,		10 00
3d do.	to Luther Chamberlain, of		
Westborough,	.	.	7 00
4th do.	to Adam Fay,	.	5 00

The Committee would be very happy (if occasion were given) to congratulate the community on the improvements in the art of making Butter and Cheese : but in truth for the last few years, the Cheese has been rarely capable of sustaining a premium, and the butter of no remarkable or uncommon excellence ; nothing better than what every farm in the commonwealth might and ought to produce, and where there is, as in many places there may be, a well constructed dairy room, purified by a running stream, stock selected for rich milk, sweet pastures, clean and thorough milkers, and makers, butter might be offered far surpassing in sweetness and richness any to which the premium is given. If the farm offer no particular advantage for a dairy, great attention in scalding and purifying every vessel and article used as well as great care, that the cream be not kept too long, and that no buttermilk remain, would add many thousands of dollars income to the venders, and increase the consumption by gratifying the taste and promoting the health of the purchaser. Much credit is due to Mr Bemis

of Watertown, for his exhibition of a jar of butter made in the summer of 1829, perfectly sweet and of good flavor.

The premiums on old Cheese are awarded :—

The 1st to Elisha Matthews,	\$10 00
The 2d to Job Ranger,	5 00

On new Cheese.

The 1st to Hooper Holland,	10 00
The 2d to Samuel Denny,	5 00

All the cheese offered was, with two exceptions, from New Braintree and Barre; and from those excellent grazing townships we are almost always indebted for the display of cheeses; some of them were certainly very good, but not of such uncommon excellence as to deserve higher commendation than receiving the premiums.

The sage cheese of Capt. David Lee, offered only for exhibition, was very excellent of its kind.

Respectfully submitted,

BENJ. GUILD,	} Committee.
J. C. GRAY,	
I. THORNDIKE, JR.	
I. P. DAVIS,	
BENJ. POLLARD.	

It should be borne in mind, for the credit of those to whom premiums have been given, that as most of the butter entered for premium at Brighton, is afterwards sent to Boston market, and sold as Brighton butter, purchasers are apt to think Brighton and premium one and the same, though they are by no means convertible terms.

REPORT OF THE COMMITTEE ON MANUFACTURES.

The Committee on Manufactures report —

That none of the premiums offered have been claimed. The woollen and cotton fabrics, of prime necessity, being now well established and sufficiently encouraged by the market

prices, the Trustees considered it the best policy for the country to confine the premiums to such branches of the manufactures, as are about being commenced in the country or to such branches as are yet in an infant state.

The exhibition presented a variety of beautiful fabrics, principally articles of taste, wrought by females. The committee have selected such as they thought entitled to particular notice, for ingenuity or excellence, and recommend the allowance of gratuities to those who presented them, as follows:—

To Mary Fairbrother of East Sudbury, for the best specimen of brown linen thread \$2 00

To Mrs Samuel Denny, for two linen table cloths and two pairs of socks 5 00

To Jonas Munro for linen Diaper 2 00

To Aurelia White of New Braintree, for a straw bonnet 2 00

To John Hunter, for rose blankets 5 00

To Catherine E. Cook of Brighton, (aged 12 years) for a white lace veil 3 00

To Sophia M'Farlane of Lowell, (aged 12 years) for white lace veil 2 00

To Louisa W. Chamberlain of Cambridge for a black lace veil 2 00

To Adeline Marsh of Sutton, for woollen socks 1 00

To Deborah Walker of Barre, for palm leaf hats 2 00

To Eliakim Morse of Medfield, for diamond plat bonnets, a new article deserving particular encouragement, 5 00

To S. U. Lovett of Beverly, for a woollen hearth rug 3 00

To William Cobb, for a diamond plat bonnet and one of English straw 7 00

A specimen of broadcloth exhibited by Mr Shepherd of Watertown, made from common wool, was thought to be a very good quality of low priced cloth.

A great number of articles entered, after the time allowed to the committee for examination, they have unavoidably omitted to notice. These have, however, been entered for public in-

spection, with labels designating the persons who presented them, and have had the commendation to which they were respectively entitled from a numerous company of discerning visitors.

RICHARD SULLIVAN,
ROBERT WATERSTON, } Committee.
JOSHUA CLAPP,

REPORT OF THE COMMITTEE ON BUTTER.

The Committee report for the gratification of those who contributed to raise the fund to be given for a premium to the best butter, that in collecting a number of competitors and many of them from distant states, one object, at least, seems answered. This offer also brings to the market a large quantity of butter, which, in being made for the premium, seems to assure the purchaser that the owners had exerted their highest skill, and had bestowed their best attention in the making and laying down what they considered worthy of so large a premium. The Committee award without hesitation, and with perfect unanimity, the first premium of *one hundred dollars* to Mr Henry Sprague, of Charlton, Worcester County, (Mass.) for six kegs of butter, with flat hoops; and they award with equal unanimity, though with more hesitation, the second premium of *fifty dollars* to Mr Moses Newell of West Newbury, (Mass.) Several other entries were so near in quality to Mr Newell's that it required more comparison and deliberation before deciding upon this premium, than was requisite in awarding the first. The butter of Mr Newell, though in only four tubs, was still decidedly different in each, particularly in the quantity of salt used. The inequality of several jars or kegs of many of the entries made the task of deciding difficult, — some butter, to which no premium was given, might probably have been selected better than Mr Newell's, but the adjoining keg of the same entry would neutralize its excellence as a lot. Mr Tuttle, of Westminster, Vt. had his butter laid down

in a mode new to the Committee ; it was packed in neat soap stone boxes, which were of clean appearance, and apparently calculated to preserve a uniform temperature, though they may not be so entirely secure at the cover, as wooden boxes ; whether they be a real improvement can be ascertained only by experience. There were, in the whole, thirtyfive entries for the premium, from Pennsylvania, New York, New Hampshire, Massachusetts, Vermont, and Maine. The butter, for the most part, was well made and clean in its appearance, and made with different objects, some of it being for present use, and some with a more particular view to its perfect preservation for a great length of time. One parcel, which was very sweet, though somewhat salt, was made by the owner ‘ for the use of the fishermen to take on their voyages next season.’ It will probably retain its excellence, and though a premium for butter intended to be used one year from the time it is made, would be highly useful, and give excellent butter to the navy and shipping, the committee considered this premium, as intended for the best market butter for winter consumption, without any reference to the economical arrangement of his dairy, the food of the cows, or even the stock. Dr Warren, who had imported some butter from Montreal, (Lower Canada,) was kind enough to send it to the Hall for exhibition ; and it was certainly very excellent, not superior, however, in the opinion of the Committee, to that to which the premiums are awarded.

One entry from Pennsylvania, and one from New York were made, but the state of the winds and weather unfortunately prevented the arrival of the butter, which the Committee the more regret, as those states are so justly celebrated for their success in this department of agriculture.

Respectfully submitted.

BENJ. GUILD,	} Committee.
J. C. GRAY,	
I. THORNDIKE, JR,	
I. P. DAVIS,	
BENJ. POLLARD.	

We have subjoined an account of the different entries, numbered as entered, the quantity, and the prices they brought at auction. Some of the lots were disposed of at private sale.

<i>How packed.</i>	<i>By whom entered.</i>	<i>Where made.</i>	<i>Quantity.</i>	<i>Price per lb.</i>	<i>When made, &c.</i>
No. 1, 7 tubs	Calvin Sanger,	Sherburne, Mass.	314	19 cts.	
2, 12, 6 & 5 jars	Calvin Howard,	Fitchburg, Mass.	327	21 to 22	between June and October.
3, 7, 6 & 5 jars	Luke Bemis,	Barre, Mass.	309	13 to 14	July and November.
4, 4, 6	Oliver Crosby,	Atkinson, Me.	470	30 to 32	since Sept. 25.
5, 4, 6	Moses Newell,	Southborough, Mass.	303	19 to 20	no written account forwarded.
6, 16, 6	Fitch Winchester,	Billerica, Mass.	726	18 to 24	
7, 5, 6 & 1 box	Ichabod Everett,	Westborough, Mass.	333	25 to 30	
8, 11, 6	Luther Chamberlain	Whately, Mass.	424	17	
9, 3, 6	Jonathan Wait,	W. Vt.	300	17	
10, 6, 6	A. U. Weeks,	Salisbury, Vt.	390	17 to 20	no written account forwarded.
11, 6, 6	Michael Crosby,	Bedford, Mass.	318	17 to 20	from August to October.
12, 6, 6	Abijah Nurse,	Rutland, Mass.	300	21 to 25	no written account forwarded.
13, 12, 6	Nathan Cushing,	Woodstock, Vt.	317	16 to 17	no written account forwarded.
14, 3, 6	Nathan Brigham,	Lempster, N. H.	348	22 to 25	
15, 7, 6	Oliver Clark,	Norwich, Mass.	317	18	in 9 days from 46 cows.
16, 11 jars	John Prince,	Winipisogee Lake, N. H.	300	15 to 16	between 15 Aug. and 19 Nov.
17, 10 tubs	Hiram Ranney,	Westminster, Vt.	530	18 to 20	no written account forwarded.
18, 10, 6	H. Herrick,	Reading, Vt.	450	18	
19, 6, 6	R. Converse,	New Braintree, Mass.	650	20 to 21	
20, 6, 6	D. Hunter,	Barnet, Vt.	390	22	
21, 6, 6	Cloud Harvey,	Charlton, Mass.	331	25 to 26	
22, 22, 6	Henry Sprague,	Northborough, Mass.	1300	16 to 19	
23, 12, 6	William Eager,	Barnet, Vt.	622	14 to 16	
24, 7, 6	A. J. K.,	Norwich, Vt.	354	380	
25, 4, 6	William Oliver,	Westborough, Mass.	322	300	
26, 6, 6 & 1 bil.	Wm Loveland,	Montreal,	380	54	
27, 6, 6	Otis Brigham,	Guilford, Vt.	300	394	
28, 1, 6	Horatio Gates,	Saratoga, N. Y.	317	17 to 18	
29, 6, 6	B. & J. Lynde,	Westminster, Vt.	317	17 to 18	
30, 6, 6	Wm T. Smith,	Danvers, Mass.	317	17 to 18	
31, 6, 6	Wm Tuttle,	Philadelphia,	317	17 to 18	
32, 6 stone jars	Wm P. Endicott,	Worcester, Mass.	317	17 to 18	
33, 6, 6	Reuben Haines,		336		not received.
34, 6, 6	Walter Bigelow,				arrived too late for premium.
35, 6, 6					not received.

We have subjoined a few notes taken from the written accounts which generally accompanied the several lots of Butter.

No. 5.— Mr Newell's butter, which took the second premium of *fifty dollars*, was made from the cream of 14 cows, since September 25th — there were about 80 lbs. more made of similar quality, which was not entered. The cows had common grass feed only. The butter was packed in old firkins, (which are considered better than new ones) in layers of about two or three inches deep, with a sprinkling of fine salt between each layer. The butter is thus more easily taken up as wanted for use.

No. 11. — Mr Weeks' butter was made from Aug. to October. Mr W. has the morning's milk skimmed in 12 hours, the evening's in 24 hours from the time it is taken from the cow; the cream is churned every other day; the butter salted with Liverpool, ground; laid down solid; nothing added, except a little brine: a waxed bag was fixed between the butter and the wood.

No. 12. — Mr Crosby's mode of making is by skimming the milk while perfectly sweet, churning soon, *not waiting for large churnings*; when the butter has come, he turns off the buttermilk, and then churns the butter again, in order to beat out the buttermilk well, without the warmth of the hand: in each of the two successive days, he works it over thoroughly, and then packs it down in tubs previously soaked with brine made clean by boiling and skimming. Mr Crosby has repeatedly taken the premium for the best butter exhibited at the Brighton and Concord Cattle Shows.

No. 17. — Mr Prince's butter was made at his farm on Merino Island in Winnipiseogee Lake, N. H. It was made between the 10th of August and 19th of November, from cows mostly of the Alderney breed. His pastures are newly cleared land: though his cows have been freely fed with pumpkins. His dairy room is neat and convenient, and attached alongside of an ice house. The butter as soon as packed is put into the

ice house. Less than the usual quantity of salt is used ; no coloring ; but a small quantity of saltpetre and loaf sugar is added.

No. 24. — Mr Eager's butter was made from 17 cows, since the 15th of September. The cream was gathered in seven weeks, from the milk, after sitting from 4 to 6 meals, which was varied according to the state of the weather, so that the cream might always be perfectly sweet. It was immediately churned after being skimmed ; and from 5 to 6 lbs. pure fine salt put into 100 lbs. of butter, which was the only ingredient made use of.

No. 28. — Mr Brigham's butter was put down before the 25th of November, and intended for fishermen to take out to sea the next season. It was prepared with salt, saltpetre, and sugar, which has for a number of years enabled the butter to endure their trips without injury.

No. 29, which was of very fine quality, was entered by Dr. Warren of this city, for exhibition only, and was procured of H. Gates, Montreal. It was made by a Yankee farmer of the name of Hastings from Vermont, who now resides near Montreal, and has a dairy of 50 cows. — The 54 lbs. exhibited was the product of a single churning, in November.

No. 34. — Mr Haines' butter was made from the common breed of cows in Pennsylvania, with about one in ten of the prime full bred Alderney breed, so that the butter is 10 per cent Alderney, which Mr H. thinks makes a perceptible improvement. Their feed has been from a common pasture, with a large proportion of white clover. The pasture has been frequently top dressed, but not ploughed for more than twenty years.

Mr Sprague's butter, which took the *first* premium, was sold to Messrs Harrison Gray Otis, E. Codman, D. S. Ingraham, T. B. Coolidge, Mr Hancock, and Mr Barker, keeper of the Marlborough Hotel.

Mr Newell's lot which took the *second* premium, was sold to Messrs George Hallet, Ebenezer Rollins, and Ignatius Sargeant.

REPORT OF THE COMMITTEE ON GRAIN, VEGETABLE
CROPS, &c.

The Committee appointed by the Trustees to examine the claims for premiums for Grain and Vegetable Crops, — for Experiments and Discoveries, — for Raising Trees and Hedges, — submit the following Report —

The past season has been a most bountiful one, and has been particularly favorable for the production of almost every article which claims the attention and rewards the labors of agriculturists in this part of the United States. It is not too much to say, perhaps, that there has not been a week in which the want of rain has been severely felt in this commonwealth, — while the sunshine and heat have proved sufficient for bringing to maturity the crops and fruits of our farms, and orchards and gardens. Of grass, wheat, rye, barley, Indian corn, — of potatoes and vegetables of almost every description, the crops have been truly abundant. For fruit of every kind, — excepting, perhaps, pears and grapes, for which latter the summer has been too cool and moist, — few seasons have been so good. Blessed with a year of so much plenty, it was natural to suppose that the claims of our farming brethren for the premiums offered by this Society, aided by the bounty of the Legislature, would be numerous and respectable. In this expectation the Trustees have not been disappointed. At the same time they may be permitted to say, that much more, they hope and trust, might have been exhibited had the inclinations of our farmers corresponded with their ability. The Trustees are aware, indeed, that some extraordinary exertion and skill are necessary, in aid of a good year, to meet the requirements of the Society; but our enterprising husbandmen, and all

other classes of citizens, would do well to have in mind, always, that nothing of great worth is to be had without industry, and care, and skill. Labor is the price demanded of us, by a wise Providence, for everything truly valuable. It will be well, too, to have constantly before us the force of example. The natural effect of a successful effort, in any pursuit, is to stimulate others in the same course, and thus to promote the general good. Care and system, like everything else, become easy by practice.

It is a remarkable fact, that among the applications before this committee, there is not any instance in which two applications have been made for the same article. They are not embarrassed, therefore, as some of the committees have been, in comparing the merits of numerous *competitors*. They regret that *one claim*, at least, should not have been made for each article proposed by the Trustees.

The committee recommend, — instead of abstracts by the committee of the modes of culture, as has been usual, — that the statements of the claimants, in their own words, should follow each case. They are led to propose this, not only because they are generally very well expressed, but because they will be more intelligible to practical cultivators, probably, than any views the committee can give.

WHEAT.

1. The Committee consider Messrs Tristram Little, and Henry Little, of Newbury, in Essex County, as entitled to the premium of \$20 for a crop of spring wheat, being $34\frac{1}{2}$ bushels on an acre. These gentlemen have been benefited almost every year by the premiums of this Society, and seem richly to deserve all they have received, as judicious cultivators.

NEWBURY, Nov. 2, 1830.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN — We sowed the present season a piece of spring wheat, containing, by admeasurement, one acre and one

rod. The soil is a rich dark loam, the past year it was cultivated with onions, and manured with yard (or cellar) manure, about eight cords to the acre, which produced between four and five hundred bushels. The 22d or 23d of last April it was sowed with wheat without any dressing, one bushel and a half was sown, (the wheat was of the white kind) the soil was once ploughed and the grain harrowed in. It was reaped in August, which cost four days' labor; the quantity of straw was as large as the bulk of five tons of hay. It was threshed and winnowed in October, which cost ten days' labor, and there were thirty-four bushels and one peck of grain.

Respectfully yours,

TRISTRAM LITTLE,
HENRY LITTLE.

This may certify, that I surveyed for Tristram and Henry Little a piece of ground cultivated with wheat, which contained one acre and one rod.

PIKE NOYES.

This may certify, that I assisted the subscribers in threshing and measuring their crop of wheat, and there were thirtyfour bushels and one peck.

DANIEL S. HEATH.

Essex ss. November 2d, 1830.—Then the aforementioned Tristram Little, Henry Little, Pike Noyes and Daniel S. Heath, made oath that the statement and certificates by them subscribed were true. Before me.

DANIEL ADAMS 3d, *Justice of Peace.*

BARLEY.

2. To Capt. Benjamin B. Howard, of West Bridgewater, Plymouth County, is awarded the premium of \$20 for his crop of barley, being about 48 bushels the acre.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN—The following production of one acre one half and eighteen rods of land, cultivated with barley, the

past season, by the subscriber, on his farm in West Bridgewater, is offered for the Society's premium. The soil is a dark, rich loam, pretty free from stones, and somewhat inclining to moisture. A part of it, in 1829, was cultivated with Indian corn, having been manured at the rate of about eight common cart loads to the acre; the rest was cultivated two seasons successively previous to the past, with potatoes; receiving each year, at the rate of about 15 loads of manure. The crop of corn was estimated at 45 bushels to the acre; that of potatoes, in 1829, at something near 400 bushels. In April last, it was twice ploughed with a light plough, and about 35 cart loads of coarse manure from the barn windows, were drawn on, spread, and harrowed in. About the first of May it was sown with barley at the rate of about three bushels to the acre, and with grass seed, which also were ploughed and harrowed in. The crop was mown and got in, in July, and was threshed out in September with two horses, *in less than two days*. It was cleaned with a machine, and measured 78 bushels and one peck of clean handsome barley.

BENJ. B. HOWARD.

This may certify, that I have measured the aforementioned piece of land cultivated with barley, and it contained one acre one half and eighteen rods, and no more.

S. O. COPELAND, *Surveyor*.

This may certify, that I assisted Capt. Benjamin B. Howard in cultivating the aforementioned piece of land, and the foregoing statement relative to the same is true according to the best of my knowledge and belief.

ASA RANDALL.

We, the subscribers, hereby certify, that we have measured the aforementioned crop of barley, and that the foregoing statement relative to the measure thereof is true.

BENJ. B. HOWARD.

ASA RANDALL.

Plymouth, ss. October, 1830.—Then personally appeared the abovenamed Benjamin B. Howard, Stephen O. Copeland, and Asa Randall and made oath to the truth of the foregoing statement and certificates by them respectively subscribed.

Before me,

AUSTIN PACKARD, *Justice of the Peace.*

RYE.

3. To Mr Richard Adams, jr, of Newbury, \$20 for the premium on winter rye — being $38\frac{3}{4}$ bushels on an acre.

NEWBURY, Nov. 1, 1830.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN — Agreeably to the directions of the Trustees of the Massachusetts Agricultural Society, requiring each claimant to state the quality of the land, its previous product, &c, I submit the following, in support of my claims for the Society's premium for raising the greatest quantity of rye on an acre the present year. The soil is a yellow loam; the season of 1829 it was cultivated with white beans without any manure, which produced about 25 bushels. The September following, (after the crop was harvested) the ground was ploughed and five pecks of rye was sowed and harrowed in. The April following, there was spread on the same about ninety bushels of leached ashes. It was reaped and threshed in July, and the produce was 38 bushels and three pecks. The straw I sold which weighed more than two tons. The labor done on the above crop was, as you will see, nothing extra except the dressing with ashes.

Yours respectfully,

RICHARD ADAMS, JR.

These may certify that I surveyed the above piece of land which contained one acre, and no more.

TRISTRAM LITTLE, *Surveyor.*

This may certify that I assisted in reaping and threshing the within crop of grain for Mr Adams, and there was 38 bushels and 3 pecks.

DANIEL S. HEATH.
HENRY LITTLE.

Essex, ss. November 2d, 1830. Then the aforementioned Richard Adams, jr, Tristram Little, Daniel S. Heath, and Henry Little, made oath that the statement and certificates by them subscribed were true. Before me,

DANIEL ADAMS 3d. *Justice of the Peace.*

POTATOES.

4. To Mr Payson Williams, of Fitchburg, an old customer from the County of Worcester, \$20 for his crop of potatoes—about 570 bushels to an acre.

[To the Committee on Agricultural Products.]

GENTLEMEN — As a claimant for the premium offered by the Trustees of the Massachusetts Agricultural Society for the largest crop of Potatoes grown on the acre the present season, I will state, that the ground on which my crop was grown, inclines to the morning sun, is of a deep reddish loam, somewhat rocky. In 1829, an abundant crop of winter rye was taken from it, preceded by turnips for the successful culture of which, the sheep (100) were nightly folded, for two previous years, after the hay crop was taken off. The rye stubble was turned under immediately after reaping that crop. The process for preparing the ground for the Potato crop was as follows, viz. In May 1830, fifty cart-loads, 33 bushels each, of unfermented sheep and other manure, was evenly spread on and immediately ploughed in 10 inches deep, furrows struck three feet each way at right angles. Twentyfive bushels of the River of Plate Reds and Philadelphia Blues, were used for seed; the reds planted whole, one in a hill; the blues split in two pieces, which also seeded a hill; the planting finished the last of May. The plants had two good hoeings; the last when in the bud, the

plants or stalks being ten inches in height. The harvesting finished the last of October. The amount of the Potato crop was by careful measurement, six hundred and eighteen bushels on one acre and fourteen and a half one hundred and sixtieths parts of an acre. Also had on a part of the field about 1000 lbs. crook-necked and West India squashes, planted in every other hill and every other row, where the potato seed was wholly left out. The land is probably good enough to produce a much larger crop when the season is congenial to the culture of the Potato. The past season has been *too wet and cold*, even for this hardy vegetable.

Yours, &c.

P. WILLIAMS.

I, Philip F. Cowdin, sworn surveyor of the town of Fitchburg, hereby certify that I have this day measured for Payson Williams a certain plot of ground on which Potatoes were grown the present season, and find the same to contain one acre and fourteen and a half one hundred and sixtieths and no more.

P. F. COWDIN.

FITCHBURG, Nov. 2d, 1830.

I, Benjamin Tilden, of the town of Fitchburg, hereby certify that I assisted Payson Williams to harvest the crop of Potatoes grown the present season on the plot of ground as stated in the above certificate of Philip F. Cowdin, and found the same, by accurate measurement to be six hundred and eighteen bushels.

BENJAMIN TILDEN.

Worcester, ss. Nov. 6, 1830.—Then the above named Benjamin Tilden appeared and made oath to the truth of the above certificate by him subscribed.

Before me,

DAVID BRIGHAM,

Justice of the Peace.

Expense of Cultivation.

50 loads manure, the proportion drawn by the Potato crop probably not more than 50 per cent, at \$1 per load	\$25 00
Carting the same and spreading	5 00
Ploughing in the manure	4 00
Labor in planting	5 00
25 bushels of seed at 2 shillings	8 33
Two hoeings	9 00
Harvesting the crop, say 20 days' work, at 4 shillings.	13 50
	<hr/>
	\$69 83

In reading Mr Williams' account of his fine crop of potatoes, our farmers are requested to notice that the manure was spread over the ground instead of being put in the hill in the common way. If using manure at broad cast will give as good a crop of potatoes or corn as putting it in the hill, will it not be a great saving of labor, and at the same time place the manure more equally on the ground? No process in farming seems more slow and tedious than dunging out in the hill. It is hoped that this statement of Mr Williams, who has always appeared before this society as a very intelligent and successful farmer, will bring out some remarks from practical men on this subject. It will be seen that Mr Ware, of Salem, planted this year, in the same way, both corn and potatoes. Among our New England crops, none are so general, or more important, than corn and potatoes, and if a more economical mode of raising them, as regards labor, can be found out, it will be a great public benefit. Mr Williams used a great quantity of manure, it is true, — perhaps twice or three times as much as is usual among farmers, — and his land was in good condition before; but then he intimates, and seemingly with reason, that, owing to its being spread and ploughed in, not more than half its strength was drawn out by the potato crop. All experi-

ments of this kind deserve regard, and one great object of the Society is to elicit the opinions of observing farmers for the public good. Perhaps some one will attempt to show the difference in labor, as to planting corn and potatoes, by dunging in the hill or otherwise. It is a question which needs to be settled.

MANGEL WURTZEL.

5. The committee take pleasure in recommending the premium of \$20 to be paid to Mr Gideon Foster, of Charlestown, Middlesex County, for his admirable crop of mangel wurtzel. If so large a quantity of this valuable vegetable has been raised by any one in this country, on an acre, it has escaped the notice of the committee. The largest amount that has been presented on any former occasion, was, it is believed, by Messrs T. and H. Little, of Newbury, which fell a little short of 1000 bushels. It will be seen by Mr Foster's well prepared statement, that, *measuring* by cart loads, he had 1413 bushels, — that *weighing* by the cart load, and taking the standard weight of 56 lbs. the bushel, he had 1542 bushels, or 86,455 pounds, upwards of 42 net tons. For this premium there has been no other claimant, but the committee hope and believe, that it is not hence to be inferred that our farmers do not generally raise more or less of the mangel wurtzel. On the contrary, they are led to think, that if, as regards most of those vegetables for cattle, a half acre had been proposed instead of a whole one, there would have been numerous competitors. It may be thought advisable, another year, not to insist on an acre, and to have several premiums for the same article. Considering the length of our winters in this northern climate, — that our stock must be fed from the barn from the middle of November to the middle of May, six months, — how important and desirable is it that we should feed our cattle on something besides dry fodder — some food which is, at the same time, succulent and nutritious. No climate is better adapted than ours for mangel wurtzel, sugar beets, (the most nutritious of the two, and about equally productive,) ruta бага, common turnips, carrots, parsnips, potatoes, — and of all these,

cattle are very fond, and most, if not all of them, form the most wholesome and favorite food of sheep and swine. Consider the *value* of those crops, too, by the acre, compared with hay, and that any season good for hay will be good for them. Perhaps it may be truly said, that there is as little uncertainty of a good crop of corn and potatoes as of hay. From the claims exhibited in this report, it will be found, that of mangel wurtzel there has been produced 42 tons to the acre, of ruta бага 25 tons, of potatoes nearly 18 tons. Of sugar beets, carrots and turnips, it is presumed the same quantities can be raised as of potatoes or ruta бага : of parsnips not so much, but this last vegetable is the sweetest of all. These are prodigious crops, such as may not, in common seasons, be generally or often realized ; but supposing one half, or one third as much can be produced, what stronger inducement can be offered to every farmer to turn his attention to these things ? On our farms, we rarely have more than a ton and a half or two tons of hay on an acre, and though it is not pretended that more labor is not wanted to raise vegetables than hay, and more manure and particular care, yet, as a preparation of the ground for hay, and as forming a most grateful variety in the food of animals, and considering the prodigious difference in weight of crop, who can possibly doubt its being better to put a small portion of our grounds into this kind of culture ? We have generally, it is believed, had the idea that much more labor and skill are necessary in cultivating mangel wurtzel, sugar beets, and ruta бага, than for corn and potatoes. This notion is natural enough, because we have attended to the latter much more than the former. But we have, in this report, as we had in the report of the last year, the testimony of a practical and nice observer, Mr Colman, who, in speaking this year of ruta бага, says — ‘The whole, from the sowing to the gathering, was not two thirds of the labor usually bestowed on planting, cultivating and gathering an acre of potatoes.’ E. H. Derby, Esq. a man of experience in these things, says, in 1825, that ‘cabbages, tur-

nips, mangel wurtzel, sugar beets, are all raised at as little expense as potatoes.' If all this be true of potatoes, it certainly may, with truth, be said of Indian corn. We have the opinion of Mr Colman, which is worthy of notice, as to the *value* of ruta бага for fattening or for store cattle.

CHARLESTOWN, Nov. 30, 1830.

The following is an account of the culture and product of one acre of Mangel Wurtzel raised by Gideon Foster, of Charlestown, in the County of Middlesex, Massachusetts.

The soil is a black loam with a clay bottom, inclining six degrees to the northeast. In 1829, three fourths of the same was planted with potatoes, with a moderate supply of manure in the hills, and yielded an ordinary crop; the residue was in mangel wurtzel and grass. Early in the month of May of the present year, there was spread on said land about eight cords of compost manure, and ploughed to the depth of eight inches, and harrowed in the usual way. About the 12th of May, I sowed the seed in rows by hand, twentytwo inches apart. I thinned them from 8 to 12 inches apart, in the rows when they became the size of a goose quill. I should have preferred an earlier period for this part of the cultivation had it not been for the threatened destruction by the wire worms, which were then numerous. Nothing more was necessary in point of cultivation to perfect the crop, but to keep the soil loose about the roots, and the land clear of weeds, which was principally done with shuffling hoes, except frequent cropping of the under leaves, by which I obtained treble benefit. 1st, by obtaining an excellent food for swine and horned cattle; 2d, by admitting the sun and air to the roots; 3d, by removing them near to the crown, about the middle of September, which gave them time to heal, so that on harvesting they are found to be in a sound and healthy state for preserving them through the winter.

They were harvested in the 3d week of October. The roots were measured in a wagon body that held twentythree bushels by accurate measurement. This measure was filled

61 times, and there were 10 bushels over. The wagon body was then placed on its wheels and twice filled (to the judgment of those of us present) as formerly, and weighed at the patent scales of D. Devens, Esq. of this town. The average weight of which was as per tickets annexed, 1415½ lbs. making 1433 bushels or 86,961 lbs. or 43 tons, 961 lbs.

It was observed by agriculturists who inspected the field, that much of its beauty consisted in the uniformity of the size of the roots, none of them being so large as have been raised by others, while very few of them were small. The largest that I have known to have been measured, being 25½ inches in circumference.

The actual expense of raising said crop, I estimate to be 35 dollars.

GIDEON FOSTER.

Middlesex, ss. Nov. 30th, 1830.— Then personally appeared the aforesaid Gideon Foster, and made oath to the truth of the foregoing statement before me,

E. PHINNEY,

Justice of the Peace.

I hereby certify that the foregoing statement of Gideon Foster, relative to the quality and weight of Mangel Wurtzel raised by him the present season, I having assisted in gathering and weighing the same, is correct and true.

his

Witness, E. PHINNEY.

WILLIAM X COOPER
mark.

CHARLESTOWN, Nov. 30, 1830.

Middlesex ss. 30th Nov. 1830.— Then the aforesaid Wm. Cooper, made oath to the truth of the foregoing certificate, before me,

E. PHINNEY,

Justice of the Peace.

RUTA BAGA.

6. Rev. Henry Colman, whose farm is in Lynn, Essex County, is entitled to the premium of \$20 for his fine crop of ruta бага—741 bushels on an acre, weighing $68\frac{3}{4}$ lbs. a bushel, being about 25 tons and a half.

SALEM, DEC. 1st, 1830.

[To the Committee of the Massachusetts Agricultural Society on Agricultural Experiments.]

GENTLEMEN — Accompanying this you have the certificates of a crop of Ruta Baga raised this year on my farm in Lynn. From these it will appear that on an acre, measured by a sworn surveyor, on one side of the field, there were gathered 741 baskets full ; and that forty baskets of the abovenamed, weighed at the town scales 2750 lbs. net weight. This, allowing 56 lbs. to a bushel, the standard weight assumed by the Society, would give a crop of 903 bushels to the acre.

The turnips were planted on the 29th of June and 2d of July ; about one pound and a half of seed was used for the acre ; and they were gathered and stored in cellars and in the barn in the last part of November.

The ground on which they grew is a good soil, neither wet nor dry, and bore the last year an abundant crop of onions, and corn the year preceding the last. It was well manured at both times and in fine tilth. It was manured with at least six cords to the acre of barn manure the last spring and sowed again to onions ; but the seed, entirely failing, it was ploughed, harrowed, furrows struck out, and about eight cords of barn manure spread in the furrows ; ploughed again so as by a back furrow to form a ridge, over the manure, and the seed sown with a small drill harrow on the ridges, making the rows about twenty inches asunder. As soon as the plants were of sufficient size, a drill harrow, with small shares fixed to it, to cut off all the weeds was passed through the rows ; and the plants thinned with a small weeding hoe to the distance of about eight inches apart, and the vacant places filled up by transplanting from the super-

numerary plants. They were once more harrowed and cleaned, which was a very small labor ; and owing to the very unpropitious weather, were not harvested until very late. Some of them were very large ; one weighed 15 lbs. and many were nearly as large. The exact expense of cultivating the acre cannot be estimated, as it was intermixed with other farm work ; but the whole from the sowing to the gathering, was not two thirds of the labor usually bestowed on planting, cultivating, and gathering an acre of potatoes.

My Swedish Turnips the last year, of which I raised considerable quantities, were fed off to my oxen, dry cows, young stock, and fatting sheep. To the cattle they were of very great advantage ; and for feeding sheep, they proved the last year, by an accurate account, worth from ten to twelve and half cents per bushel. The man who has the care of my stock considers them as among the most profitable feed, which can be given either to fatting or to store cattle. Three years' experiment has increased their value very much for these purposes in my own estimation.

I am, gentlemen, very respectfully yours,

HENRY COLMAN.

This certifies that I have superintended and assisted in the gathering and measuring of a crop of Ruta Baga or Swedish Turnips, grown this season on an acre of ground, which had been measured and stacked off on the farm of Mr Henry Colman in Lynn ; and that we obtained from the said acre 741 baskets full after they had been topped and cleaned, and that 40 baskets of the above named turnips at the town scales in Salem, weighed 2750 lbs. net weight, as by the annexed certificate of the town weigher.

JOHN MARSH.

This certifies that a load of Turnips driven by John Marsh weighs 4520 lbs. gross, 1770 lbs. tare, 2750 net lbs.

A. BROWN, *Town Weigher.*

SALEM, DEC. 1, 1830.

Essex ss. Dec. 1, 1830. — Then John Marsh made solemn oath to the truth of the above certificate by him subscribed.

Before me,

DUDLEY L. PICKMAN, *Justice of the Peace.*

SALEM, DEC. 1, 1830.

The committee are sorry that, after so fine a year, no one should have preferred a claim for the premium on carrots, or sugar beets, or parsnips, or even turnips. A better season for raising them rarely if ever occurs. As to English turnips, the culture of them is so common and easy, and they have proved so fine this year, it is really surprising that no claim should have been presented. Can it be because they have not been raised by many in sufficient quantity to gain the premium, or is it not rather that our worthy farmers have neglected to make application? Whatever may be urged as to their not being in the habit of attending to mangel wurtzel, &c, it cannot be said of turnips, which have been cultivated always to a greater or less extent, by almost every farmer.

ONIONS.

7. The committee award the premium of \$20 to Mr Jos. Perkins, of Newbury, for his crop of onions. The product by estimate was 657 bushels on an acre. Mr Perkins has supposed $52\frac{1}{2}$ lbs. to the bushel. No standard weight is given by the society, but the committee believe 50 lbs. to be about the average weight of a bushel.

NEWBURY, Nov. 12th, 1830.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN — In conformity to the rules and regulations of your society, I send you a statement of the amount, together with the manner of culture &c., of one acre of onions, the growth of 1830. The quality of the soil is a yellow loam, and has been cultivated with onions several years. In 1829, it was sown as usual with onions, without any dressing, and produced between 400 and 500 bushels. The 2d of December last,

after the crop was off, there were three and a half cords of barn manure ploughed in, in ridges. — The 21st and 22d of April following, the land was ploughed and harrowed, and two and a half pounds of seed was sown in drills about fourteen inches apart. The first hoeing and weeding was done June 11th, which cost five days' labor. The 2d was July 2d, four days' more; the last weeding was done the 22d, which cost four do. They were harvested early in October, and between 9,000 and 10,000 bunches have been bunched, which, estimating 15 bunches to the bushel, (each bunch weighing $3\frac{1}{2}$ lbs. is a fair calculation,) together with those that have been topped and sold by the bushel, there were 657 bushels.

JOSEPH PERKINS.

These may certify that I assisted in cultivating, and harvesting, and measuring the above crop of onions, which said statement is correct.

JOSHUA PERKINS, JR.

This may certify that at the request of Joseph Perkins, I measured one acre of land and marked it off, (which ground was, to appearance, covered with onions.)

TRISTRAM LITTLE, *Surveyor*.

Essex ss. Nov. 13th, 1830. — Personally appeared Joseph Perkins, and Joseph Perkins, Jr, and made oaths to the foregoing statements, by them severally subscribed, before me.

SILAS MOODY, *Justice of the Peace*.

No claims have been sent in for the best crop of Indian corn, — for the greatest quantity of vegetables raised for consumption on the farm of the claimant, — for the greatest quantity on one acre of millet, of common beets, cabbages, dry peas, dry beans, mustard seed, flax and hemp.

TURNING IN GREEN CROPS FOR MANURE.

8. To Mr William Buckminster, of Framingham, Middlesex County, the committee award the premium of \$20 for his ex-

periment 'of turning in green crops as a manure.' This attempt of Mr Buckminster, in the judgment of the committee, well deserves the attention of farmers, and particularly of those who live too far from a city or town to buy manure. The practice of enriching or renovating land by ploughing in green crops, is a very common one in Europe, though hardly known here. But would it not be well to try it? Our farmers in general have more land than they can till, owing to their not having manure enough, or because it is too far from their barn yards; and hence it is that some large farms, and naturally of good soil, actually produce less, but with infinitely more labor, than much smaller ones that are well cultivated. Indeed the desire of having large farms, without giving to them the necessary outlay, is the common error of our country. The inevitable result is scanty crops and more labor. An acre is mown, often, for a ton of hay or less, where with decent care two tons might be had. A pasture often of a dozen acres, which might be easily ploughed, does not afford food enough for one cow; whereas at small expense, it might be made to support four or five. Now, in a country like ours, where produce is so cheap and labor so dear, this is unquestionably a wrong, not to say a ruinous, mode of management, — a mode which drives our children to the Western or Eastern country for want of land, who might have enough here if rightly used. But if farmers *will* have more land than they can till in the ordinary way, for want of manure, what better plan can be devised than that of ploughing, and sowing, and turning in the green crops, with the sole view of fertilizing their lands? Whether it be afterwards used for mowing, or tillage or grazing, still it must be good husbandry, if we can rely on the testimony of Mr Buckminster, and on the experience of farmers in England.

The remarks of Mr Buckminster on bog or meadow mud, are worthy of notice. It is quite certain, as he says, that used in its crude state, as dug from the meadow, it is inert and seemingly useless; but when put in the barn-yard and hog-pen,

and trampled upon and mixed with manure, it becomes an excellent compost. As almost every farm has bog meadow, it must be well known, that after being several months in the barnyard or pigsty, it makes an excellent manure for corn in the proportion of about two thirds mud and one third dung. Whether Mr Buckminster's notion of carting it at once to the ground where wanted, to save labor, and there mixing it with manure, is a correct one, every man will judge for himself. The common idea has been, that to take it to the barnyard *first* is better. But all must agree that it may be very profitably used as food for plants, and therefore ought not to be overlooked in the management of the farm.

On ploughing in Green Crops as a Manure.

FRAMINGHAM, Nov. 10, 1830.

[To the Trustees of the Massachusetts Agricultural Society.]

I have been induced, partly by the premium you offer, and partly for my own satisfaction, to make some experiments as to the value of green crops ploughed in for manure, and I send you the result.

In the middle of May, 1828, I ploughed up three and a half acres of pasture land that had, for many years, been tilled by the former owner until the crops would not repay the labor. It was a light-loam, but not sandy. It had been so reduced, that 10 acres did not afford sufficient pasturage for one cow through the season. We sowed immediately after thus ploughing, a bushel of buckwheat to the acre, and in 6 weeks rolled down the buckwheat in the direction we intended to plough, and then ploughed and sowed as before. In the latter part of August, we turned in a second crop of buckwheat — having rolled it down flat as at first, and then seeded it down with clover, herds grass and red-top, one peck and a half to the acre. Most of the clover was winter-killed, and a great part of the herds grass and red-top. Early in the spring of 1829, we sowed 10 lbs. of clover seed to the acre; and with a light harrow, went slowly over the whole. The seed took well, but the clover was not

high enough for the scythe when the other grass was fit to cut. We mowed what had not been winter-killed; and where it yielded best, we obtained one ton of herds grass to the acre. Immediately after mowing we turned in our cattle, and fed the grass close. Last spring, (1830) the grass was so forward we turned in our cattle on the 19th of April. There were 8 acres in the whole field, but there were only five acres that bore any grass worth 50 cents. These five acres were the three and a half managed as I have stated above, and one and a half on which grass seed was sown in April, 1830; and fifty bushels of leached ashes mixed with loam, spread on the surface. On these 5 acres, (and the 3 which bore nothing,) I pastured 4 cows constantly for 4 months, wanting two days, and they had an abundance of feed. I never had any pasture ground yield so well before. I think these green crops improved the land as much as a good dressing of manure, and the comparative expense I estimate as follows on one acre, viz.

With Manure.

20 ox cart loads of manure	.	.	.	.	\$24 00
Hauling $\frac{3}{4}$ mile and spreading	.	.	.	.	5 00
Ploughing once, green sward	.	.	.	.	2 00
Harrowing and sowing	.	.	.	.	1 00
					<hr/>
					\$32 00

With Green Crops.

First ploughing, green sward	.	.	.	.	\$2 00
2d ploughing, and rolling with man and horse	.	.	.	.	1 00
3d ploughing, and rolling	do,	do,	.	.	1 00
Three harrowings	do,	do,	.	.	1 00
Two bushels buckwheat	.	.	.	.	1 55
Sowing do,	.	.	.	.	25
					<hr/>
					\$6 80

Thus you will see, that it has cost me less than one fourth as much to enrich my land with green crops, as it would with ma-

nure. If my grass had not been winter-killed the first year, I intended to have shown you the precise weight of hay cut on an acre. The above estimate of the cost of manure is less by 12 cents per load than it can be purchased for in this place. I have given more within 2 years.

Farmers ought, in duty, to make the trial for themselves. They generally have much land, (miscalled under improvement) 10 acres of which, will not pasture a cow. Such land usually lies distant from the house. They say they cannot make manure enough for the whole farm, and they find it more profitable to lay their manure on lands nearer home. They do not seem to conceive it possible to enrich them otherwise than with stable manure. If they would plough and sow properly, they could make the whole rich.

They further object to growing crops to be ploughed in; for, say they, 'The growing crop will exhaust the land as much as it will enrich the same when ploughed in, so that we end where we began.' This would be correct reasoning, undoubtedly, if the growing crop obtained its whole sustenance from the ground.—It probably does not one sixth part. It was the knowledge of this principle that gave me confidence of success in the experiment. The advantages of green crops for manure are greater where the lands are distant from the barn, than in other cases.

Bog Mud as Manure.

I have made another experiment on compost manure. In April, 1828, I carted 30 loads of mud or muck from a pond-hole, which had a black soil 4 feet deep.—I thought it must be valuable manure, though nothing but rushes and skunk cabbage, had grown on it for 20 years, owing to its sunken position. These 30 loads were immediately spread on an acre of worn-out land, and ploughed in. White Beans were planted on a part, buckwheat on a part, and barley on another part.—No crop worth cutting was produced. The muck did no service, either last year or the year before. Last autumn I tried

it again ; carted out 15 loads on to the high land aforesaid, and mixed with those fifteen, two loads of stable manure ; the whole was mixed together, and suffered to lie in a heap till the 10th of last May. It was then carted on to the same land as the other, and the whole heap produced all the good effects of clear stable manure. — I raised a good crop of Indian corn from it, without putting on over 20 loads of the compost to the acre. Such was the difference between applying this muck raw or green, and applying it after it had been six months fermenting in a mass, thawing, freezing, &c, to become pulverized.

All our farmers in this quarter, in making compost manures, carry the most bulky, heavy ingredients many rods — some half a mile to their cow-yards and hog-pens — and when these materials have rested there long enough, they are then carried back again to the fields. I would save them most of this labor. Let them make their compost heaps on, or near the soil where it is to be applied, and as near as possible to where the chief ingredient lies. This will save a double carting of half or three quarters of a mile. They will have to carry nothing but a little stable manure to that distance in most cases, instead of carting back and forwards the whole mass.

Respectfully yours,

WILLIAM BUCKMINSTER.

I, William J. Buckminster, certify that I labored on my father's farm, William Buckminster, in 1828 and 1829. That in the former year he ploughed up between 3 and 4 acres of land that produced very little of anything. That we sowed in 1828, two successive crops of buckwheat on the same, and ploughed it in, and that we seeded the land down about the first of September with herds grass, clover, and red-top. The clover was nearly all winter-killed. We sowed more early in spring, and harrowed it in among the standing herds grass. The herds grass obtained a good height, but was quite thin. The clover came up well, and afforded fine pasturing after

hay. Last spring, we turned in four cows on this land and pastured them there four months, wanting two days, taking them out on the 20th of August — the cows pastured on this lot thus laid down, and about one acre and a half more in the same enclosure, making not more than five acres for the four cows. There were from two to three acres more of meadow land, which the cows hardly meddled with, and which produced but a trifle of feed, but the cows ranged over it. The cows had a great abundance of feed, and in many places the grass was so rank the cattle suffered it to grow up and go to seed, one yard square in a place. When we sowed the buckwheat we had much more grass for pasturing than we have ever had after manuring, and then planting and laying down to grass.

WILLIAM J. BUCKMINSTER.

FRAMINGHAM, Nov. 30th, 1830.

Middlesex, ss. Dec. 1, 1830. Then the above named William J. Buckminster, personally appeared and made oath to the truth of the above certificate, by him signed, before me.

WILLIAM BUCKMINSTER, *Justice of the Peace.*

YELLOW LOCUST.

9. The committee are glad to be able to bring before the public another experiment of Mr Buckminster's, for which he or Mr Clark, of Northampton, may become entitled to a premium of \$50 the next year: — it is for an acre of the yellow locust, having not less than 1000 trees. The yellow locust, (*Rabinia pseudo acacia*,) is the common locust of our country, and well known to everybody. It has much to recommend it. The ravages of the locust borer has, for forty years, perhaps, discouraged its cultivation in this part of the country. Before that period it was thought, by discerning men, a most valuable tree, and is still thought so in Europe, where, as the late learned Professor Peck has said, 'this insect does not exist.' It was cultivated in old times for various reasons. Planted on gravelly and sterile lands, where it grows freely, it was

found greatly to fertilize the ground. It was considered valuable for its great durability when used for posts and as timber. It was used for tree-nails in ship-building, not only for its strength and durability, but from its not shrinking like other wood. It was esteemed for its quickness of growth, its beauty as an ornamental tree, and its aptitude to perpetuate itself by its roots, which run near the surface of the ground, — and if wanted for no other purpose, could be used as a most pleasant article of fuel, as much so as walnut. At the present time, nothing but the worm prevents our holding the locust in the same estimation our ancestors did, and shall this discourage us so much as not only to prevent our planting, but incline us to extirpate the few trees that remain? Rather let us encourage the *tree* and endeavor to *extirpate the worm*. This would be a much wiser as well as a more manly course. There are parts of the country, the more southern parts, it is said, where this insect does not abound or is not known, and why may we not hope, ere long, to be freed from it? At worst, the locust will do for fire-wood, though liable at present to be blown down before it attains much size, — and for this purpose alone, considering that our forests are disappearing, — it is well worthy of public attention. Bad as the case is, it may be much doubted, whether, as it can be so easily done, so good a use can be made of our gravel knolls and barren spots as to plant them with the yellow locust.

FRAMINGHAM, Nov. 15th, 1830.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN — I have been induced by the premium offered by you, to plant out an acre of Yellow Locust trees. In the spring of 1828, I procured at the seed-store of Mr Russell, in Boston, a quantity of seed, and poured into it *boiling* water, and suffered it to soak therein three or four days. Then I sowed it in the garden, and carefully weeded the plants; many of them grew to the height of four and a half feet that season. In the spring following, I transplanted them on to about two

thirds of an acre of poor, worn-out land, placing them in rows 8 feet apart, and at 4 feet distance in the rows. On one side of this plat in 1829, I sowed more seed, with the view of making a hedge fence with them, and of supplying more trees to make out the acre. I have this season covered over an acre with the trees of the two seasons, and there are more than 1000 trees on the acre. On two thirds of the acre, therefore, the trees are now of three years' growth — on the other third, of two years' growth. On the best of the land some of the trees are four and a half inches in circumference, and seven feet high. I chose a poor soil for the trees that they might enrich it.

I notice that wherever Yellow Locust trees grow, the grass under them is not only much increased in quantity, but that the cattle eat it in preference to other grass — always biting it close to the ground. I therefore prefer it for hedges to any other live growth — for, so far from injuring our pastures, they are a positive benefit to them.

Respectfully yours,

WILLIAM BUCKMINSTER.

DESTROYING BEE MOTH.

10. Mr John Stone, of Sudbury, in Middlesex, has made known his method of securing his bee-hives from the bee-moth. The committee recommend the publication of this statement, considering every hint on this subject as worthy of notice ; but as the same in substance has been recommended by others, they do not think it merits the premium.

I, John Stone, of Sudbury, in the county of Middlesex, and Commonwealth of Massachusetts, do testify and say, that I have kept bees, for the term of ten years last past ; that for several years my bees were very much injured by the bee-moth, so called ; I lost two hives of bees, which were wholly destroyed by them ; every bee was killed and all the honey and comb consumed, and the hive filled with web. In the spring of 1824 or 1825, about the first of April, I raised my hives about $\frac{5}{8}$ of an inch, by putting a small block of that thickness under each corner of the hive ; immediately the bees

commenced the work of destruction upon the moth-worm, and entirely cleared the hives of them. I have followed the practice ever since, and have never received any injury from the bee-moth, the worm having been invariably destroyed by the bees, and brought out of the hives. The hives have remained in this situation till the month of October, when I have taken away the blocks and let them down. JOHN STONE.

Middlesex ss. Sept. 27, 1830. Personally appeared John Stone, and made oath to the truth of the above affidavit, by him subscribed. Before me,

ISAAC FISKE, *Justice of the Peace.*

EXTIRPATING BORER.

11. Mr David Prouty, of Hanover, Plymouth County, has sent a letter to the Trustees, dated Oct. 19, 1830, on the subject of the Apple Borer, which the committee advise to have published with this report. They fear, however, that no effectual remedy has yet been formed to extirpate this most mischievous worm. They invite further attempts to destroy this enemy of our favorite fruit tree.

Respectfully submitted,

P. C. BROOKS, *Chairman.*

HANOVER, OCT. 19th, 1830.

[To the Trustees of the Massachusetts Agricultural Society.]

GENTLEMEN — The cheapest and most effectual mode of extirpating the Borer that attacks the apple tree, which has come to my knowledge, is, the application of sharp, coarse gravel, applied as follows : viz. dig off the turf about 4 inches deep, 6 inches to a foot from the tree ; spread about half a common cart-load of the afore described gravel, so as to come in close contact with the tree — this article the borer dislikes, and immediately makes his escape ; — this has been entirely and completely successful in my orchards for three years past ; it may have been tried by others, but I have seen no account of it.

I would recommend a general trial the ensuing year, having the fullest confidence in its entire success.

Very respectfully,

Your most obedient and humble servant,

DANIEL PROUTY

REPORT OF THE COMMITTEE ON THE BEST CULTIVATED FARMS.

The Committee appointed by the Trustees to examine and consider the claims for premiums for the best cultivated Farms, submit the following Report:

The Committee have been disappointed to find only two applications for premiums, for the best cultivated Farms. They flatter themselves, however, that this has not happened through any indifference to the subject, among our intelligent and respectable farmers, but to its novelty, and their not receiving notice in season to comply with the conditions prescribed. They are the more confirmed in this opinion, from finding that one of the applicants states, that he received information that such a premium was offered, only two days before he made out his statement on the 18th of October.

The public will perceive, that the Trustees have appropriated a considerable portion of their income to this object. It was done after much consideration, and a full persuasion that it would prove useful. The only doubt they have ever entertained of its expediency arose, from the district, over which the society extends, being so large that it would not be practicable for the Trustees, personally, to visit and inspect the farms of the applicants. In this respect, the local or county societies have a great advantage over ours. They can inspect the farm of every applicant, and verify or disprove his statements with their own eyes. Premiums for this object have been granted by some, if not all of these societies, for several years past, and in the judgment of your committee, are among the most profitable to the public that can be proposed.

To remedy these disadvantages on the part of this society, as far as possible, the Trustees accompanied their offer of premiums, with a requirement of a full and particular statement by every applicant, of the number of acres in his farm, the quality of the soil, the proportion of tillage, mowing, and pasture, his manner of making manure, the quantity and manner of using it, the rotation of crops he found most successful, and the quantities of those crops, and other particulars specified in their publication, in January last, announcing the premiums they proposed to give. These statements, it was intended, should, like specifications annexed to patents for manufactures, be so full and particular, as to enable any intelligent farmer who should read them, to adopt the whole, or so much as he thought applicable to any of them, in the management of his own farm. Applications, it was expected, would be numerous, and the statements accompanying them, when published, it was thought would impart to agriculturists information adapted to their case, and on which they might with safety rely. By these they might learn the opinions and practice of skilful and practical farmers, who cultivated the same kind of soil, and paid like prices for labor with themselves. The high character of our respectable farmers for veracity and fairness, was considered a sufficient pledge against any intentional misrepresentations or misstatements; and if it should happen that some of the statements should be a little exaggerated, it was thought the evil could not be great; since at worst it would be the statement of a good farmer of what he considered the best way of cultivating such land, or perhaps a slight exaggeration of his crop. Even this might be more safely trusted, and be more useful, than a mere theoretical essay of an inexperienced man.

The Trustees were sensible, that in requiring this particular statement from applicants, they imposed on men some care and trouble, but it was believed they would not be unwilling to submit to a necessary degree of both, for the benefit of their brethren; and that they might also justly feel some gratification in exhibiting to the public the way and means by which

they successfully pursued the most honorable and useful calling of a citizen. They intended, moreover, by the liberal premiums they offered, to bestow a bounty on the successful candidates.

These are some of the motives and views which influenced the Trustees in establishing premiums for the best cultivated farms; and they still cherish the expectation that a generous competition for them in future years, will render them a successful means of conveying practical information, founded on actual experiments, to the agriculturists of our country.

Mr Erastus Ware, who for several years past has been tenant of a farm in Salem, belonging to the heirs of the late Col. Pickman, has claimed a premium for this farm. By his statement, which will be published, it appears that the farm contains 428 acres, of which 300 are rocky and broken land, and used as a pasture; 63 are English mowing, 44 salt marsh and meadow, and 21 tillage.

This farm is situate near a market town, Salem; and the principal object of the tenant is to produce milk to supply that market. He appears, also, to derive a considerable profit from apples. He enjoys, moreover, the advantage of purchasing manure when needed; and what is better, of making it from eelgrass, kelp, and rockweed, which he gathers from the beach; and the former, eelgrass, puts into his hogpen and cow-yard, and the latter spreads green on his grass land. Bog mud he likewise carts into his barnyard, and mixes with other manure.

Mr Ware has not given so particular an account of his rotation of crops as could be wished, but as his purpose was to keep as many cows as his farm would support, it is to be presumed he kept his land up no longer than was necessary to subdue, mellow, and renovate it.

His potatoes were principally raised on land newly broken up, on which manure, at the rate of eight or ten cords to the acre, taken from the barnyard, and composed of litter and deposits of the cattle, was spread and ploughed under the sod.

He states that he has found fresh or long manure best for corn and potatoes, and the old and rotten for small vegetables, especially tap rooted articles. This, it is believed, is no new or uncommon opinion. Mr Ware also, says, that he never puts manure of any kind on his land the year he sows it with small grain, that he usually lays it down with barley in the spring, and that he has often been successful in taking off a crop of early potatoes in the fall, and sowing grass seed alone upon the land the same year. The crop must be gathered early, to render this practice advisable. His practice, he says, has been to sow a peck and a half of herdsgrass, and three pecks of redtop to the acre. These quantities, we believe, are greater than are usually sown, but his crop of grass, nearly two tons to the acre, for more than sixty acres together, seems to prove that the seed was not unprofitably expended. In many parts of the state, it is to be feared, farmers suffer from being too sparing of their seed.

It is worthy of remark, that it is the opinion of Mr Ware, founded on considerable experience, that Indian corn derives no support to the stalks, nor any other advantage from hilling, and that the roots will be better nourished, and the corn less likely to be injured by the drought or wind, where the land lies nearly flat, than where it is drawn up around the stalks in a high hill.

The statement shows that this farm has been cultivated with judgment, economy, and skill, in husbandry; and this impression, we think, its appearance would make on any agriculturist who should happen to pass by it. The barns are large, but one of them is on a model for saving and preserving manure and vegetables for the use of the stock in the winter, which might be adopted with advantage in smaller buildings. The crops of the last year taken together were large, and it is believed few, if any, farms in Massachusetts will be found to have yielded a greater profit to the cultivator. The expense for labor, it will be seen, was small, in proportion to the work done. His fifty cows, averaged 277 gallons of milk for the season,

which was the principal, and probably the most profitable, product of the farm.

As the milk was sent to market instead of being manufactured into butter and cheese on the farm, an account of the management of it possibly may not be so generally useful to agriculturists, as a like intelligent account of the management of a dairy farm might prove. We think, however, the manner in which Mr Ware has cultivated this farm, and the great product he has obtained, which is among the best tests of skilful husbandry, deserve great commendation and entitle him to a premium.

The committee think it also deserving of special notice, that Mr Ware carried on this extensive farm in the neighborhood of a great market town, without the use of ardent spirits, except for medical purposes. It appears that the laborers were supplied freely with family beer, molasses and water, and cider with their food, and nothing more. This practice the committee consider a saving of expense to the farmer, and health to the laborer ; and although not very uncommon at this day, it is on a large scale and highly creditable to the parties, and it is hoped will serve to encourage others to imitate their example. The committee recommend that a premium of \$75 be awarded to Mr Ware, for the skilful and successful manner in which he has cultivated his farm.

A claim has also been made by Jonathan Allen, Esq. of Pittsfield, in the county of Berkshire, for a premium for his valuable farm in that town. The farm contains 250 acres, and appears to be improved principally as a Sheep Farm. It is washed on one side by the Housatonic, which annually overflows a tract of 40 acres of meadow, bordering on it, and leaves a deposit on the land that renders any further manure or dressing unnecessary. From this tract, if Mr Allen is not mistaken in his estimate, he gathers annually from eighty to ninety tons, better than two tons and a quarter to an acre, of the best of English hay. A young orchard of about eighteen acres, and about five acres more of the upland, are laid down to grass for hay ; the rest of the farm is pastured and tilled alternately.

The rotation of crops he has usually practised, has been wheat or rye the first year, Indian corn or potatoes the second, and the third to lay the land down with oats, or some other spring grain, and herdsgrass and clover. His practice is to sow four quarts of each, but it is to be observed that it is for pasture, if that ought to make any difference in the quantity. He lays down in this manner about ten acres annually.

Mr Allen informs us that he has tried different seasons and ways of sowing grass seed, viz. — in the fall with rye, and alone in October after taking off a crop of corn, and upon the snow covering wheat or rye, and in the spring with oats or other spring grain, and that he is satisfied the last is the best time and way of sowing it. He observes that he made several experiments of sowing grass seed alone in the fall, but always found that the grass did not get to maturity the next season.

We are informed that a committee of the Agricultural Society of that county, judged that as many as three or four acres, out of eleven acres of corn planted by him this year, would yield as much as 90 bushels to the acre, and awarded him a premium for it. The land on which this crop was raised was broken up the same year, having been manured on the grass for three or four years before, and was dunged in the hill with manure from the hogpen, when it was planted.

Mr Allen has not stated the quantities of manure used by him in any case, and as to most of his crops has given us only an estimate of their amount. This omission, we suppose, may be owing to his not receiving the notification of the Trustees offering this premium, and prescribing the particular information that must accompany his application, until his manure had been applied and most of his crops gathered. The first notice he received, he says, was only two days before he made out his statement, viz. the 16th of October.

The committee much regret this accident, but they consider that the utility of the premiums on farms will essentially depend on their obtaining from the applicants a precise specification of their whole process of carrying them on, and of the

crops they yielded ; and that from the want of this particularity in Mr Allen's statement, the Trustees would not be justified in awarding him a premium.

WILLIAM PRESCOTT, *Chairman.*

[To Benjamin Guild, Esq.]

PITTSFIELD, OCT. 18, 1830.

DEAR SIR. — On Saturday the 16th inst. was the first time that I saw or knew of the premiums offered by the Massachusetts Agricultural Society, for the best improved farm. I therefore shall be unable to make all the statements I wish to make, with that accuracy that is desirable and which may be required, but I shall make an attempt. I therefore offer my farm which lies in the east part of the town of Pittsfield, upon the Boston and Albany stage road, containing two hundred and fifty acres or thereabout. The soil alluvial and loam ; which farm I purchased ten years since and for which I paid nearly 14,000 dollars. I have forty acres of good wood land, principally covered with the sugar maple. I have also in one square lot forty acres of meadow, almost perfectly level, and irrigated or overflowed by the waters of the Housatonic river, (by which it is bounded on the east,) in the spring of the year when the snow melts away, generally, and sometimes twice or thrice in a year, so that it never requires any manure, and I have nothing to do but to keep up my fences and cut the grass, which is all of an excellent quality, consisting of herds or timothy, clover and fine English, and produces annually from eighty to ninety tons. This lot lies upon the east side of the road, opposite to my house, and the residue of my farm upon the west side of the road, pretty nearly in a square form, a little elevated above the meadow, say 8 or 10 feet, and rises but little to the western extreme of the farm. I have an orchard lot consisting of about eighteen acres, which I mow, and obtain between twenty and thirty loads of excellent hay. I have also mowed five acres in another lot, which was seeded two years since, which produced

five or six loads, making in all between 120 and 130 loads of first quality of herdsgrass and clover hay, which we have estimated at one ton to the load as we get in, well made. The residue of my farm consists of pasturage and tillage, say 147 acres, all good, which I have improved alternately for pasture and tillage by a rotation of crops, first for wheat and rye, then corn, then oats or other spring grain with clover and grass.

I have improved it the present season as follows; of winter crops, 12 acres of rye which was an excellent crop, but not measured, and two acres of winter wheat which was sowed upon corn ground after the corn was taken off, and produced, as it was sowed rather too late, but 32 bushels. I have also raised this year 5 acres of oats, which produced 122 shocks, some of which we have threshed, which have yielded two bushels per shock; if the whole should yield in like manner, the five acres will give 244 bushels, or nearly 50 bushels per acre, upon which land I had beans and oats last year. With a little manure I also sowed one bushel of marrowfat pease, which supplied my family and several of my neighbors with green pease. I harvested eight bushels well dried and fine for seed. I have also on my farm two acres of potatoes. I have dug and got in one acre only, which produced 296 bushels, besides what were dug for use for several weeks, — so that I can safely say that this acre yielded something more than 300 bushels of the flesh color, and worth double the common potatoes.

I have raised this season about 11 acres of corn of the small early eight rowed ears which is a very good crop, and will produce as determined by a committee of an Agricultural Society, 90 bushels to the acre, that is, for three or four of the best acres; for which they gave me the Society's third premium. The land on which it was raised has been mowed for three or four years, and last year broken up and hog-dung put into every hill, — hills at three feet apart. My farm is divided by a lane through the whole and fenced on either side, and then divided into 10 and 20 acre lots opening to the centre lane, so that I have more than 6 miles of fence, a part of which is half wall.

I have also raised this year two acres of spring rye, which I have not threshed, which I think will give me 20 bushels per acre. — I have also raised twenty acres of small white beans which I have not yet gathered, and which I estimate to yield fifteen bushels to the acre, or about 300 bushels in all. This field was planted two years since to corn and then to rye and oats. — I have ploughed and summer-fallowed twenty acres of old pasture where my sheep have run, and sowed it to rye and three acres more to winter wheat; all sowed about the last of August now looks finely, and if nothing befalls it, I think I may safely calculate upon thirty bushels to the acre. — The number of apple trees in my orchard is 149. Six years since I put in 1000 grafts by contract, principally of winter fruit, such as Greenings, Spitzenbergs, Gilliflowers, Russets, Golden Sweetings and Seeknofurthers, &c, &c, from which I last year made 36 barrels of cider and put up about 100 bushels of fine winter apples. To my trees I have done nothing but trim and scrape. This year, owing to a late frost, I shall not have five bushels in all. My manner of making cider is the common way. As to saving grass seed, I usually seed down about 10 acres annually with four quarts of clover and 4 quarts herdsgrass to the acre. I have made several experiments. After taking off a corn crop, I have ploughed and sowed nothing but grass seed; this was done in the month of October, and it took well, but did not get to maturity fully the next season. I have also sowed with rye in the fall, and also upon snow covering wheat and rye, and also in the spring with spring wheat, rye and oats, and I am satisfied that to sow clover and herdsgrass in the spring with oats is the best time and way. Another experiment may possibly be useful. Eight years since I ploughed and fenced about two acres of good land upon which I planted one bushel of butternuts, one ditto of walnuts, and one bushel of chesnuts, and smaller quantities of apples, peaches, pears, quinces, hazlenuts and filberts, most of which failed save only a few peaches, several chesnuts and filberts. The filberts I have transplanted near to my house,

and have now probably 100 bushes which have borne considerably the two last years, as large as any of the imported. The late frost prevented their bearing this year, but I have no doubt that they can be grown here plentifully with little trouble. My barn is 100 feet long and 40 feet wide, standing east and west, with a floor through it lengthwise over which is another floor, each twelve feet wide. Upon the south side of my barn I have a tier of stables extending the whole length 12 feet wide, which is sufficient to put up 25 head of cattle. I have one shed extending from the west end of my barn south 120 feet, half of it 20 feet in width and the other half 14 feet, capable of holding 30 or 40 loads of hay over head. I have three or four other sheds temporary or of less value. My barnyard is 120 feet square divided by a line of fence through the centre each way making four yards of about 60 feet square, with a shed for each and a well of water in the centre, from which I water each yard, in each of which I have wintered about 100 sheep, and make my manure principally by bedding them with straw. I have kept the last year two yoke of oxen and one yoke of steers, five cows and nine head of young cattle, three horses and one colt and 425 first quality Merino and Saxony sheep. We have made butter and cheese only enough for family use. Although my stock of cows are of the first quality, yet my family is large and consume all they produce; for one of my cows, which is only 3 years old, I last week received this Society's first premium as the best among 37 cows offered for premium; her calf now is only four weeks old, and she is a descendant of the stock of cattle called the Gore breed, I believe from a bull imported by the late Governor Gore; at any rate, from my connexion with the Berkshire Agricultural Society, I was induced to purchase some of the finest cattle of our part of the country, and for the ancestor of this cow I paid \$100. My other cows and stock are of the *Holderness* stock. Of swine, I only keep and fat enough for family use and some little surplus to pay laborers. I am now feeding 8 of the Byefield breed, a part of which I think will

weigh about 300 lbs. each. As to the amount of labor, for the last year I have hired only one man, and have two boys almost men; and in haying and threshing, day laborers, which in all probably costs me \$140 or \$150 inclusive of board. I would also add that in consequence of tilling so much land, I have hired 100 of my sheep pastured the past summer.

To recapitulate —

63	acres of meadow land
12	do. winter rye
2	do. do. wheat
5	do. oats
2	do. potatoes
11	do. corn
2	do. spring rye
20	do. beans
<hr/>	
117	
20	acres sowed to winter rye
3	do. do. to do. wheat
<hr/>	
140	
40	wood
70	pasture
<hr/>	
250	

It will be seen that I have mowed and tilled this year 140 acres, 17 of which has been seeded down to grass.

My stock is as follows, viz. 425 sheep, 20 head of cattle, 4 horses, 10 wild geese, and a few India geese presented to me by Gorham Parsons, Esq. a few years since. Poultry in abundance, of many sorts.

This rough draft was drawn up last evening and this morning in much haste, and is imperfect for want of more time. Yet it is as I believe true.

I am, dear Sir, very respectfully

Your obedient humble servant,

JONATHAN ALLEN.

Berkshire ss. Pittsfield Oct. 18, 1830. — The foregoing was sworn to before me as true.

JOSHUA DANFORTH, *Justice of the Peace.*

[To the Committee of the Massachusetts Agricultural Society on Farms.]

GENTLEMEN — The farm, known by the name of the Pickman Farm, of which the subscriber is at present and has been the tenant for nearly eleven years, is situated in the southeasterly part of Salem ; and comprises 428 acres of pasturage, tillage, and mowing. The pasturage includes about three hundred acres, and is broken and rocky, being similar to the land in Salem Great Pasture so called, (which bounds the Salem turnpike,) from which a good deal of it has been taken by the purchase of cow rights in that pasture at different times. No attempts have been made to improve this pasture-land, other than by clearing the bushes, and draining some low parts, as there is no prospect of a remuneration for such labor.

The amount of land under tillage the present year, has been twentyone acres, and the amount of upland, or English mowing is sixtythree acres. Of the tillage and mowing land a considerable part consists of a thin, gravelly soil of better than a medium quality, and favorable to all grain crops ; and another part consists of a clayey soil resting upon a clay pan, retentive of moisture, and yielding good crops of grass and potatoes, under liberal manuring and cultivation. The farm is well watered ; and a good deal of the mowing and tillage is so liable to be overflowed in the spring, and is so saturated with moisture, that much labor has been necessarily expended in draining, and much of it when laid down to grass has been laid down in beds ; some of the most productive grass land on the place, has been in this way reclaimed from an unprofitable marsh or swamp, and made to yield very large crops of grass. We have no land on the place, which is irrigated by any artificial process. There is of meadow land not more than five acres, which is never tilled ; but which is drained and yields

abundant crops of good stock hay. There are of salt marsh, thirtynine acres, yielding good crops of black grass ; this is ditched, from which well known advantages arise ; but no other labor is expended on it, other than that of gathering the hay.

Of the cultivated land the present year —

Five and one half acres	were sown with	Barley,
Seven “ “	planted with	Indian Corn,
Four and three fourths,	“ “	Potatoes,
One acre,	“ “	Mangel Wurtzel,
“ third of an acre,	“ “	Onions,
“ half acre,	“ “	Winter Squashes,
“ acre	“ “	English Turnips.

Several other smaller and scattered pieces, the extent of which could not be easily ascertained, were planted with English Turnips, Garden Vegetables, Melons, &c ; and the missing places in the field of Mangel Wurtzel sowed with Ruta Baga.

The manure used on the place has been principally made by the stock kept in it. By the terms of my lease, I am allowed to expend one hundred dollars a year in manure ; but having obtained a considerable quantity from the removal of an old barn, I have purchased for the last four years, not more than to an amount of sixty dollars a year. I have carted into my barnyard considerable quantities of bog mud ; and obtain from the neighboring beaches some sea-wreck — such as eel-grass, which is thrown into the pigstyes and cowyard ; and kelp and rockweed, which is carried and spread immediately on the grass land.

For small grain crops no manure is applied by me on the year of their being sowed, unless the land is very wet and cold. My barley was raised on ground, on which the preceding year I had a crop of potatoes, which were well manured, with coarse manure spread and ploughed under the green sward. My Indian corn this year, contrary to my usual practice, was raised on land which was planted the preceding year with In-

dian corn. I have found a crop which shades the ground most completely, is most effectual in destroying the squitch or twitch grass, and this was an inducement to plant corn a second time on this ground. The manure applied was at the rate of about eight cords to an acre ; was taken from the barnyard, and spread on the ground and ploughed in.

My potatoes, with the exception of a few raised on the borders of some of the fields, were raised on land newly broken up ; and the manure at the rate of eight or nine cords taken from the barnyard, composed of litter and the deposits of the cattle, was spread and ploughed under the sod.

The soil on which my Indian corn was grown, was of a high gravelly nature as before described ; and that on which the potatoes grew was flat, moist, and clayey. The potatoes were hoed twice and harrowed between the rows once. The corn was hoed three times ; but was not hilled, as has been customary ; and upon a comparison of that not hilled with a small piece, which was in some degree hilled, after a severe gale to which we were exposed in August, I am satisfied that no advantage by way of supporting the corn is gained by hilling, as was formerly practised. My opinion is, that no other advantage is gained by the practice of hilling corn ; and that corn raised on a flat surface, where the weeds are destroyed, and the ground kept loose, is by no means so likely to suffer by drought, or to be injured in its roots, or impeded in its search after its proper nutriment, as where the ground is drawn up around the stalk in a high and steep hill.

The manure applied to my other crops was of the best kind I could procure ; and applied generally, and as nearly as can be ascertained at the rate of about ten cords to the acre. For crops of potatoes and Indian corn, my experience leads me to apply my manure green and fresh ; for the smaller crops, and especially tap rooted plants, I prefer manure that is fine and well rotted.

The amount of crops raised this season on this farm is as follows.

Of Potatoes	1220 bushels.
" Mangel Wurtzel	600 "
" Ruta Baga	50 "
" English or Flat Turnips	850 "
" Onions	150 100 "
" Indian Corn	280 "
" Barley	137 "
" Squashes	3 3 ¹ / ₂ tons.
" Cabbages	3 ¹ / ₂ 3 "
" Cider	120 barrels.
" Apples of grafted fruit	1200 bushels.
" English Hay	115 100 tons.
" Second Crop	8 "
" Fresh Meadow Hay	6 "
" Salt Hay	40 "

Of Garden vegetables the family has had an abundant supply, and many loads have been marketed of which no account has been taken. The severe gale in August very much injured the crops of corn; and shook from the trees nine hundred bushels of unripe apples, which were manufactured to very little advantage into cider, and lessened much the expected profits of the orchard.

Of the above crops, the grain, vegetables, and fruit were matter of exact measurement; the amount of hay is given by as accurate an estimation of it in each load by an experienced and disinterested individual, as could be obtained.

The hay raised on the farm is generally a mixture of herdsgrass and redtop, with some clover. The amount of seed used in laying down to grass, is one peck and a half of herdsgrass, and three pecks of redtop. Of clover seed, enough is usually found in the manure; and cannot be sown to advantage in rich, moist land. When I lay down land to grass in the spring, I sow barley with the grass seed; but I have been

very successful in laying down land to grass in the fall, after taking off a crop of early potatoes, in which case nothing but grass seed is sown.

The number of bearing trees on the place is as follows —

Of Apple Trees (almost all engrafted fruit)	763
“ Pear Trees	65
“ Cherry Trees	50

In addition, I have a nursery containing 3000 trees, most of which have been engrafted or budded.

Of the apple trees, some of them are in orchards, the ground about the roots is cultivated; others of them are planted by the sides of the stone walls; and all of them are carefully pruned. In the mode of making or managing my cider, I have nothing peculiar, it being no object with me to make cider other than to use up the windfalls and the refuse of the winter apples.

There are on the farm two large barns, besides convenient sheds, cider house, and necessary out-buildings. One of the barns is in length 100 feet; in breadth 35 feet. The other barn is in length 114 feet; in breadth 42. This barn, in which the live stock is principally kept, has a cellar under the whole; the main part of which is for manure, and receives all the deposits of the cattle, and a portion of it is enclosed for a vegetable and fruit cellar. This barn has been recently built, and has a barn floor through the whole length; and the cattle are tied on one side; on the other the hay comes to the floor. The barn room is not large enough for stowing all the hay, and considerable quantities are necessarily kept in stacks out of doors.

The Live Stock kept on the place is as follows —

Oxen	6	Bull	1
Cows	50	Horses	3
Heifers	5	Fatting Swine	9

The weight of Pork is not yet ascertained, as the hogs have not been killed; but the average weight of my swine the last

year was 300 lbs. each ; this year will probably give the same result.

The chief object of the farm, is that of supplying milk in Salem, where it is sent in summer twice a day, in winter once ; a distance of about two miles.

The number of gallons sent to market during the year ending with the first of the present month is . 13,870 gallons.
Butter, made in the same time . . . 550 lbs.
Cheese, " (called four meal cheese) . 600 "

Of calves in the same time, there has been received for those sold, \$154. The others have been killed as soon as the milk of the cow was fit for use ; and their skins sold for fifty cents each ; the carcasses given to the hogs. The cows are all of native breed ; and are generally purchased when young from the country, as stock of this description cannot in my situation be raised to advantage.

The amount paid for labor the past year, has been eight hundred and forty three dollars, $\frac{37}{100}$. . . \$843 37

The amount received for extra labor in improvements on the farm, in labor on the highway and other cases, has been two hundred and sixty dollars, . . . 260 00

Balance chargeable to the farm, \$583 37

The laborers on the farm are freely supplied with family beer, molasses and water, skim-milk, and cider with their food ; but no ardent spirits are used on the farm, excepting for medical purposes. In the above amount of labor, no female labor is included ; nor is my own labor on the farm, or in marketing, or in general superintendence included.

I have sought to answer fully, and as far as is in my power, the various inquiries of the society ; but any further suggestions I shall be happy to attend to. I have been bred to agriculture from my childhood, but have had no other advantages than those derived from actual experience. So far as my opinion on the subject may be deemed of any value, it is in favor of

an alternation of crops on the same land, and an occasional change of every kind of seed.

All which is respectfully submitted.

ERASTUS WARE.

SALEM, DEC. 1830.

Essex, ss. Salem, 7th Dec. 1830. — Then Erastus Ware personally appeared and made oath that the aforewritten affidavit of nine and one eighth pages by him subscribed, was, according to his best belief and knowledge, true.

Before me,

JONATHAN P. SAUNDERS, *Justice of the Peace.*

REPORT OF THE BRIGHTON MARKET FOR THE YEAR 1830.

Report of the Brighton Market for the year 1830, which will furnish to the Farmer, the Drover, and Grazier, very important information.

[From the Boston Patriot and Mercantile Advertiser.]

At the request of several gentlemen, we have arranged the following Report of the Brighton Market for the year 1830. The slight degree of hostility exhibited on the first appearance of our reports, has given way to a more just and liberal feeling; and it is now acknowledged that they have exercised a favorable influence on the market, and tended to increase its importance and usefulness. These reports, given, we believe, with the utmost impartiality, furnish to the farmer, the drover and the grazier, similar information to what the merchant and manufacturer derive from Prices Current; and he goes on to buy or sell, with a degree of confidence otherwise unattainable. Before our reports were made, there would be at one time a glut, at another a scarcity; and the grazier who had heard of high prices, would send a large number of cattle to market, which would meet others pressing from all quarters, and be

obliged to sell at a loss; while the report of a glut would cause him to retain his cattle, when they might bring a fair price.

First Quarter, ending March 30.

4863 Beef Cattle, estimated sales		\$176,009 75
922 Stores,	" "	11,064 00
11734 Sheep,	" "	26,401 50
2301 Swine,	" "	9,204 00
		<hr/>
		\$222,679 25

Second Quarter, ending June 30.

3005 Beef Cattle, estimated sales,		\$102,170 00
344 Stores,	" "	6,880 00
5090 Sheep,	" "	9,531 67
2167 Swine,	" "	8,668 00
		<hr/>
		\$127,249 67

Third Quarter, ending September 27.

5254 Beef Cattle, estimated sales,		\$157,620 00
4820 Stores,	" "	53,020 00
45367 Sheep,	" "	68,050 50
5202 Swine,	" "	18,207 00
		<hr/>
		\$296,897 50

Fourth Quarter, ending December 27.

24645 Beef Cattle, estimated sales		542,190 00
7600 Stores,	" "	83,600 00
70506 Sheep,	" "	111,634 50
9969 Swine,	" "	34,891 50
		<hr/>
		\$772,316 00

Recapitulation.

Beef Cattle,	37,767	Sales,	\$977,989 75
Stores,	13,685	"	154,564 00
Sheep,	132,697	"	215,618 17
Swine,	19,639	"	70,970 50
<hr/>		<hr/>	
Whole No.	203,789		\$1,419,142 42

The above is gathered from our weekly reports, and may be considered nearly correct as to numbers, but as to sales we may have erred. It is, however, not exaggerated. In the last quarter of the weekly reports, the beef cattle have not been divided from the stores, but we have come to a division, as near as we could, from our judgment at the time.

In 1828, ten weeks from September 29, (which are all the minutes of that year we are in possession of) 21,546 cattle, 39,831 sheep, and 7127 swine. In 1829, ten weeks from September 28, 21,271 cattle, 31,611 sheep, and 8,524 swine. In 1830, ten weeks from October 4, 29,549 cattle, 60,179 sheep, and 7897 swine. In 1829, six months from July 6, 31,479 cattle, 81,602 sheep, and 11,702 swine. In 1830, six months from July 7, 42,319 cattle, 115,863 sheep, and 15,171 swine.

More cattle, sheep, and swine were probably driven the past year to this market, than were ever before in one year. The beef cattle, in particular, have been, through the fall season, of an uncommonly good quality.

 WOODLAND AND FOREST TREES.

[To the Corresponding Secretary of the Massachusetts Society for Promoting Agriculture.]

From a variety of circumstances, my attention for a series of years has been necessarily drawn to the oversight of several considerable tracts of wood land, in order to effect a right

management of them. This attention has become a habit and a source of gratification to me. If any apology is due for the too frequent * remarks on this subject, I must refer to the partial persuasion of my friend Mr Lowell,† whose valuable instructions and labor as to the forest, as well as the garden, have been so useful. On the right management of the wood lot, our agriculturists have been heretofore again and again inquired of, and it is most obvious that many opinions offered have been erroneous. Some of these will be stated, to show the knowledge aimed at by the society.

It will be our endeavor to submit facts and inferences, drawn from repeated experiments and more intimate experience which time has afforded. These may be useful so far as they are sustained by the judgment or coincidences in the opinion of others.

The first question on this head submitted by the society is: 'Whether the growth of wood for timber and fuel, be equivalent to the consumption in your vicinity?' The universal reply has been indicative of an alarming decrease in Massachusetts, of both timber and fuel, and that a recurrence in the country is had in many places to peat, as a substitute for the latter; while recently it is well known, that in populous places, and near the sea coast, as well as in many of our manufacturing establishments, there is an increasing and extensive use, particularly of the coal of our country, as a substitute for the article of wood. Nor is this to be regretted; on the contrary, it seems most wisely ordained, that while the discoveries of the age call for an increasing use of fuel, as to which the surface of the earth could give us no adequate supply; there are beneath us and at hand, inexhaustible resources for every possible demand. It is not to be denied, however, that these are but substitutes—and very inconvenient ones in many places; nay, more, that they are generally resorted to from the force of necessity. To most of those long habituated to it, the cheerful

* See No. 1, vol. 6; No. 1, vol. 7, No. 3, vol. 8; and No. 1, vol. 9.

† See his Translation of Michaux, and his very many useful observations, as well on this as other subjects, in the preceding volumes of this Journal.

blaze of a wood fire, has a powerful attraction. But if wood is abandoned for fuel, and no means of encouragement are given by government, whence is our timber, &c, to be derived. Here with great respect a consideration is submitted to our legislators, which, though familiar to many, may not, as to its effects, be so well known to all.

By a law passed March 4, 1829, it is enacted, 'That all wild or unimproved lands, shall hereafter be assessed at *six* per centum instead of *two* per centum, on the value thereof!!'

Excesses in legislation are apt to operate injuriously, especially when they effect changes in long established usages. The effect has been herein sudden and violent in its operation on farmers. Feeling the *threefold* weight of the *tax*, thus *increased* upon a *capital* not immediately *productive to them*, they have laid the *axe* to the *root* so heartily, that wood at 12 to 20 miles from Boston, has actually been depressed in value more than one third, and timber is of little more value than for fuel! This was probably unforeseen by the legislature, and is to be lamented. But it will meet the attention it merits, from the watchful guardians of the interests of the commonwealth.

The next inquiry has been, 'what measures are taken to provide against the inconvenience of future scarcity.' To this, the answers given are much to be regretted. In most instances, the replies are, 'the wood lots are not fenced from the habit of economy and other motives, and where cattle run at large on the commons, they eat and destroy most of the sprouts from the stumps of late fallen trees.' In fact, unless there is a surplusage of young shoots and but very few cattle to browse, the *whole* are *cropped*!

To confirm this, I will state an experiment lately made. On an enclosure, partly of good pasture land, in a spot the most retired from cultivation, on the north side of a rocky precipice, where there was not a blade of grass, and at some distance from grass feed, about ten loads of wood in scattering growth, on about an acre of ground, was cut off. Some young bushes and

the brush were left on the ground to discourage the approach of cattle. To furnish sprouts or browse, and to ascertain how far cattle would be induced to crop the shrub oak, an acre or two of young growth were cut over. The latter were very sparingly resorted to — while I was unable, with the assistance of two persons, to find one sprout of the walnut, oak, and other trees, untouched by the cattle.

It is unfortunately too true, that cattle will crop all the shoots of young forest trees which they can reach, constantly tempted by their sweet sap; thus discouraged and gradually destroyed, they give place to bushes and shrubs, which instead of affording nutriment to cattle, or being advantageous to the husbandman, make the soil not merely *useless*, but an occasion for *heavy expenditure*.

Some of the evils invariably arising to lots recently cut over, by browsing, will be stated. First, a tree or sucker thus deprived of its main shoot, it is said, never grows straight, or becomes a timber tree, and its thrift is injured.* Next, if the trees are cut in the proper season, when the sap is said to be down or the leaf is off, in the following spring, the circulation of the new system then puts forth its effort, strongly for the needed action of the atmosphere, by the function of its leaves, &c. If this is not afforded, vegetative life is endangered, if not lost.

For these and other reasons which will follow in connexion with this subject, it is apparent, that, as relates to both of these questions, the 'growth of wood and timber.' — or the means of provision against future scarcity, the inroad, or browsing of cattle, must be prevented.

* A forcible demonstration of the power and the healthy functions of the leaf, and the effect of their loss, may not be thought out of place here, besides being somewhat analogous. Some years since, a tract of pasture land, about 15 miles from this city, appeared to be overrun with Sumach, (*Rhus typhinum*) so useful as a dye stuff. A worker in morocco urged the occupant to gather the leaves and dry them at \$20 a ton. As there was a large family of children, it was set about in good earnest, and over five tons were gathered and paid for. It is not believed that five pounds of this material have grown on this land since!

The next question presented is, 'in getting your wood for fuel, do you pick the oldest trees, or do you cut clear?'

The reply from individuals, as well as societies, mostly given is, 'It is generally practised to cut the oldest and most decayed trees, leaving the rest.'

Our belief is, that our farmers have attained a better knowledge and practice, and that both experience and observation will well justify the now prevailing usage with them, of 'cutting clear.'

Where old and decayed trees only are selected, the growth becomes more and more scattering, and the young trees or suckers, deriving no vigor from the sun and atmosphere, fall into decay. This remark, with some others, may perhaps be deemed a repetition of what has been before said; but it is well to note what time has confirmed.

The cutting of two growths on several lots since the period alluded to, has passed under my observation. Some of these were demonstrative of the disadvantage of 'picking out the decayed trees,' as well as the benefit of cutting clear.

The practice in one instance had been, in times long gone by, to pick out the trees as wanted, for timber, or fuel, and the growth had become very scattering, and of no sensible increase; though most of them were of white oak, and from ancient growth and great size, had become very valuable; yet when the lot was again cut over, there were more cords of wood, and a greater profit in the latter, than in the former case. The first was a product of more than a century — the latter of only thirty years!!

It would be a waste of time to multiply remarks, as might be done, on this head.

It may here be observed, that the information sought for by the society, has relation to 'our wood lots, and the best means of production for fuel' — as to our timber, there is no great scarcity at present; there seems to be enough to meet the demand. But the principles of production, are widely different, in relation thereto. Timber, it is said, to endure long, must be

matured by age, of thinner growth, &c. But as to this, our country itself, since its settlement, can hardly be said to have had a reproduction!!

The next question which has been proposed is, 'what method is best calculated, to increase the value of woodlands?'

To this the answers given are general and indefinite, alluding mostly to the keeping out of cattle. It is here intended to submit some reasons for consideration, as well as the result of several experiments of different modes, by which it would seem that the cutting clear and having a reproduction, is by far the most promising and effectual mode to be pursued with us.

And first, there is generally on all farms some rough or rocky soil in 'wood,' unfit for culture, and which would be unproductive in any other appropriation.

Next, as to the certainty herein — there is no known instance of a failure in a regrowth. This has been often predicted, particularly on some lots where the tops of the trees were mostly dead; this was a score of years ago, and there is now a very thick growth, almost fit for the axe! It will be said that there must be a period of decay in trees — that this is the course of vegetation, and indeed the law of nature!

However true this may appear, it may yet be answered, that after cutting off an old lot even, there spring up innumerable young shoots, which seem to have been hidden, or inactive, beneath the surface, and then start into new life. The suckers, too, put forth with still more vigor, until the surface is so thickly covered that some are induced to thin the growth by a selection of hoop poles — at least to *early gain*, if not *ultimate advantage* — as to which opinions vary.

As to the general principle of the germination of suckers, it appears that the roots of old trees throw up their shoots at a greater distance, converging towards the stump, and gradually becoming more and more thick. In middle age they start nearer; while in younger trees they spring from the stump itself as well as about it.

A failure in vegetation from what would seem to be old age, is very rare; indeed in many cases where the roots of large trees have not put forth, a sufficient reason has appeared, (as is apprehended) in the modes of cutting. The farmer strikes inward and downward to the heart of the tree, and a hollow or basin is often left sufficient to contain several gallons of water. Fermentation is thereby had in every stage and process, and the apertures of the sap vessels are clogged, and as it were poisoned thereby.* This appearance has presented itself, and been so often noted by the writer, that the attention of agriculturists is solicited hereto.

If such is the effect of this practice, a remedy is easy, by cutting a notch or gap in the rim or exterior of the stump.

In closing, as to the inquiries of the Society which have preceded, it should be noted, our judicious farmers, it is believed, have generally of late been induced first to cut clear, as well as prevent the browsing of cattle on a recently cut lot, and next to appropriate certain portions of their farms (especially those least calculated for culture), to a reproduction of a growth of wood — and thus afforded the safest answer, as to the best modes to be adopted.

The importance of the subject in discussion, has further induced the Society, some time since, to offer ‘a premium of One Hundred Dollars, for the best plantation of white oak, and some other trees raised from seed.’

It was doubtless a principal object to encourage efforts in bringing forward nurseries by planting the acorn, and a subsequent culture of the soil. This plan some have thought might be extended to a row culture in lots, coppices, &c. To

* To show the effect that may be produced on the most extensive roots and fibres of newly cut trees, the following fact is stated.

A grove as well as several rows of that pernicious tree, called with us the Lombardy poplar, unfortunately introduced by a bad taste, was not only cut off but wholly eradicated by the following method. On cutting down the trees, a hole of three or four inches was bored with an auger to prevent waste, and a handful or two of salt put on each stump — not a single sprout ever appeared above the surface. The same has been since seen in instances of other trees.

afford one experiment for inquirers, though on a somewhat different principle, I took about six acres of old pasture land, about seven years since, and proceeded gradually to plant thickly over the whole lot several bushels of acorns, chesnuts, &c, in the following manner :

A tongue of earth was raised by the hoe, and an acorn put beneath at a depth of two to three inches ; then the sod was pressed down by the foot or hoe, to prevent a loss by birds, squirrels, &c ; all stock was kept from the enclosure. Trees have vegetated to be sure, but they seem quite unthrifty in the tough grass-sward with which they feebly contend ; and there appears at present, (as I had indeed apprehended) little room for much expectation from this mode.

At the present price of land and condition of the country, any attempt to raise a wood-lot by appropriating a valuable soil thereto, with the expense of culture, &c, may be found by far too expensive.*

We are now brought, in closing these remarks, to the utility of nurseries for the rearing of forest trees, which has been most strenuously urged in this Journal.

It is believed that the seed of a forest tree (particularly an elm or an ash,†) placed in a nursery at the time of setting out a number of trees of the usual size, in such cases may be afterward transplanted and added thereto, and present the largest growth.‡

If these views are correct, with the aid to be expected from the ardor and intelligence of the Horticultural Society, it will

* I have had covered very desirably with a thick growth, several barren spots which were offensive to view, by setting out two or three pitch-pine trees (*pinus rigida*), which is a most unwelcome intruder on a good soil to shed their seeds thereon. Probably to have gathered the cone at early frost, and to have scattered them on the soil would have had the same effect.

† From the extraordinary size of the tap root, or some other cause, I have had no success in transplanting the walnut or shagbark.

‡ An elm from the forest, set out at usual size, in 20 years gave 3 feet 4 inches.

An ash set out as above, gave 3 feet 2 inches.

An elm seed, planted in a nursery, and transplanted to a row, gave 3 feet 9 inches.

An ash seed planted as above, gave 3 feet 10 inches.

no longer be allowed 'as a mortifying fact, that the inhabitants of Massachusetts import most of their ornamental forest as well as their fruit trees from abroad.'

These remarks are submitted, 'not so much for any knowledge the writer may possess, but that the attention of others may be turned to the subject. Thus, every step in the progress of experience, will be towards the perfection of knowledge.'

I am, sir, yours,

JOHN WELLES.

ASPARAGUS.

The following communication, from the Hon. John Welles, was first published in the New England Farmer. It contains much useful and valuable information.

Among the earliest and most valuable productions which the opening spring presents for our use, is that nutritive and healthy plant, Asparagus. It is really a subject of regret, that this should be so universally acknowledged as a great luxury, and on every account be so desirable — and yet, not be more invariably had, and conveniently placed, near the door of the cultivator, for family resort.

There seems to be but one reason that can, with any degree of satisfaction, be assigned for this, and that is, the supposed intricacy, labor, and expense of bringing forward what has been termed an Asparagus Bed. The fact is, that most works on agriculture, are so loaded with the requisites for a good bed, that it is not to be wondered at that some repugnance is had, and some delay suffered in the undertaking.

It is believed, that in our climate at least, most of the trouble and expense is needless; and that a good and productive bed may be had in so cheap and simple a manner, that many who have been discouraged by the expense as well as the art and mystery of the process, will no longer be so influenced. But your readers have a right to expect some satisfactory reasons for this undertaking, before they engage in it.

The comparative results of several experiments will be stated herein, and some few observations submitted to the good sense of your readers, that they may draw their own conclusions and govern themselves accordingly.

One of my predecessors, in about 1765, from a wish for the convenience of a good asparagus bed, as well as a strong impression of the difficulties of having a good one, set about it in earnest. By all report, there was trenching or deep digging, paving with bricks at the bottom, a layer of manure low down, and much more dug into the soil. This, certainly, became a good bed, and it was always so considered. In about 25 years, or 1790, its decay was very observable, and it soon dwindled away to little or nothing. For some years, the privation was submitted to. But in about 1800, a new bed was made with the same labor and expense, except the paving. This too, proved a good bed. It lasted about the same time with the preceding, and some two or three years since, was allowed to go to grass.

About 12 years ago, while the last mentioned bed was in full bearing, I was led to think that much of the trouble might be avoided in the process and preparation for its culture. A piece of ground was taken on the same farm, of a deep rich soil. After a common corn crop was taken off, the land was ploughed and manured in the usual course. Holes were then dug 12 to 14 inches in depth, and about the same distance apart, and two or three shovels of compost manure was mixed with a part of the earth. The roots of a year's growth were then inserted at about six inches in depth. This bed has flourished, and been thought as productive as any whatever. I, at the same time, with a view of a more full and fair course of experiments, took a piece of land in another place of opposite character, being a thin light soil, and adopted a like course, and the result has been equally favorable. The only difference to be noted was, that the latter was more early in coming forward from the nature of the soil.

However rare it may be, that there is any over cultivation or preparation of soil for any vegetable production, it would seem here to be the case. The old forms appear to have been kept up, and to have discouraged a more general diffusion of this valuable plant. Doctor Dean, in his husbandry, has somewhat simplified this matter, but not sufficiently. The proposed mode of placing at 6, 8 and 9 inches, is quite too near. The duration of 10 or 12 years, is a mistaken one; it lasts with us double that period.

The management of the bed may be given in a very few words. In the fall of the year, it is important to cover it with horse manure; in the spring it should be raked off, and the bed lightly forked over so as not to touch the roots. If the bed from frequent weeding becomes low, it may be raised with dock-mud to advantage. This produces no weeds, while the saline particles are favorable to its growth. Where this cannot be had, any rich loam may be taken. Three years is agreed in as the most eligible period of cutting. No reason is perceived for supposing it a marine plant. The lightness of the hull, containing the seed, often may place it at high water mark where it may thrive well. I am, &c, J. WELLES.

LETTER FROM HON. JOHN LOWELL,

BOSTON, JAN. 19, 1831.

[To the Trustees of the Massachusetts Society for the Promotion of Agriculture.]

Will you permit an associate, who has for 25 years been connected with you, but who from ill health has been compelled to withdraw himself from your society, and labors, to make a few remarks on a subject of great interest to the cause of agriculture? The topic which I propose to discuss, is the cultivation of the various kinds of vegetable productions which we comprise under the name of grasses. I understand by this term, all those vegetables, which are consumed by domestic animals, as food in pastures, or as hay.

There certainly is no subject more important to those parts of our country which depend on raising, and fattening domestic animals of the useful classes, the ox, the horse, and the sheep.

I know very well, that I shall be met at the outset, by the reply of *practical* farmers, that we are not to be instructed on this subject. We know better than any theoretical farmer can know, what is best suited to our soils — we have herdsgrass, and clover, (white and red,) and red top, and we want no more. They are better for us than any of your outlandish grasses. Wait, gentlemen, I reply; there is one Yankee grass unknown to *many* of you, but well known to the owner of the extensive meadows on the Charles River, the fowl meadow grass. If this truly Yankee grass could be translated to all the meadow bottoms, the naturally moist, cold, half peaty lands of New England, their produce would be at least doubled. It is difficult to procure its seed. It is not for sale in sufficient quantities; whether from its ripening with difficulty or from whatever causes, it is not always a certain producer; but still its value is beyond all calculation. Low meadows are chiefly furnished with the different species of *carex*, a coarse, sharp, worthless grass, on which no animals but those which are nearly famished will feed, and on which those who do feed constantly decline. We have then one species of grass *not usually* cultivated, which is of inestimable value. It is no idle speculation, but sober fact, and unless a defender of ignorance will maintain, that the fowl meadow grass can only flourish in the Dedham meadows, our agriculture has much to gain by the active, earnest, assiduous propagation of this grass.

I have cited this solitary case, merely to gain a patient hearing. Of our three favorite grasses, the herdsgrass or timothy is in very bad repute in Europe. They consider it a very coarse and not a very nutritious grass. It is not extensively cultivated in any part of Europe on this account.

I am, however, disposed to admit, that it is with us highly valuable — but its value is limited by the following conditions: On low lands, or highly cultivated grounds, it yields a great

and a steady crop. It is less liable to lodge than any other grass. It falls in with our too careless habits of cultivation, because it may be cut in the month of June, or it will stand till August, at which last period it will be of about as much value as straw, though even then it will have a bright, and beautiful appearance, and be saleable. It is admirably adapted to innholders, and livery stable keepers, because it wears well. The youngest horses will find their powers of mastication sufficiently taxed in consuming a rack full of it in a night, and it will take nearly *the whole night* to effect this. In dry land, it soon runs out, and in all grounds it gives very little after crop. I believe all these propositions to be true. The red clover is never used in Europe, as we commonly use it. It is almost always employed as a green crop — as a succession crop to be fed down by various animals, and then turned under as a preparation for wheat. Indeed, as a hay crop it must be admitted to be of very small value. As we seldom use it in New England, as it is used in Europe and in the Southern States, I must consider it as a very inferior grass, for us. Its duration being so short, (for it only lives two years in any case) is a very serious objection to it. We are often deceived in this respect, because its heads ripen in succession, and new plants are always springing up in our grounds, and we do not perceive what is certainly true, that no clover plant ever reaches its third year.

As to the red top, by which I understand, the *poa pratensis*, most common English grass of our meadows, our pastures and our lawns, it is unquestionably the best gift of Providence, to pasturing or grazing countries. It is perennial. It has creeping roots. It will come in spite of all your efforts, and if it were not for its natural enemy, the couch grass, it would in ten years overcome all other grasses. It makes admirable hay — the very best of hay for all sorts of cattle. But its defects are, that its crop is light at all times, and as its creeping roots soon fill the ground, the sod becomes bound, and requires breaking up every few years.

I have thus given a true character of all our favorite grasses — not from theory but from 25 years' close experience and observation.

If there were no other grasses than these in existence, or none better, we ought to be thankful for what we have, and endeavor to make the most of them. But is this so? No, it is not so. And we are the only people who make any pretensions to knowledge, who confine themselves to a catalogue or list of grasses so small, and of so doubtful comparative value.

Let us first examine the practice of the first agricultural nation of Europe — the nation which produces the greatest amount of food, for its extent of soil, in all Europe. (We know too little of China to say whether its productions do or do not exceed those of Great Britain.) In laying down a meadow, as they term it, which does not mean as with us, wet land, but mowing land, it is their practice to sow from six to ten different varieties of grass. And this practice is founded on sound philosophy, which means no more than the result of intelligent experience. It is founded on this well known fact, that every species of soil, and more especially rich soils, will give nourishment to many varieties of plants, each acquiring a different species of food, the whole aggregate of whose productions will be much greater than if the same soil was sown with one species of plants only. This will not appear extraordinary to those who have been accustomed to the extensive cultivation of exotic plants — while one class of plants, the Cactus tribe for example, will flourish best in sand, and gravel, and brick dust — another in pure peat — another in pure sand; others require the richest composts, pure humus, or the finest vegetable soil. If you give to the plants which prefer a poor silicious soil, or peat, rich earth, they at once lose their health, and become rotten at the root and perish. This is in exact conformity to that wise, intelligent and beneficent system by which the whole universe is governed. Without entering into the inexplicable laws, which govern the vegetable kingdom, as well

as the animal, we may content ourselves with the *fact* ; and the only question with which we need trouble ourselves is, whether the *fact be so or not*. It is certain that the experience of the English farmer has been in favor of this great mixture of seeds ; I can only add in favor of this theoretical, if it may be so called, *doctrine*, this *fact*, that in a rich natural meadow, which has never been broken up for fortyfive years, and as I believe, for 200 years, I have counted fifteen species of natural grasses, all flourishing without apparent interference, and none appearing to disturb the growth, or even luxuriance of others.

Having made these preliminary remarks, I shall say something of such grasses as are cultivated in Europe, and of which I have made a fair trial. I beg it to be fully understood, that I speak only of my own experiments, though I shall take notice briefly of the experiments of others, which have come to my knowledge.

The orchard grass, *dactylis glomerata* is one of the grasses frequently sown in Great Britain, though I cannot find that it is used on the continent of Europe. It has been growing into favor in this country, and gradually taking the place of herdsgrass, or timothy. It has been successfully cultivated by my intelligent friend John Prince, Esq. of Roxbury. In consequence of his recommendation, I have tried it for several years past, and am unable to speak of it with such unqualified praise as has been bestowed upon it by others. Its advantages are, that it is a very early grass, affording an early pasturage, and an early crop. It bears repeated cuttings, and affords a great quantity of after feed. Its disadvantages are, that unless its seed is most abundantly sown, it is too apt to come up thin, and to remain in detached bunches ; as grass it is eaten greedily but when made into hay, it is not a favorite food for either the horse or cow — at least such has been *my own* experience. I account for this from this fact, which I have never failed to remark ; the upper parts of the leaves are apt to turn brown or perish before the flower stalk is fit to cut. From this cause the flavor of the hay is not only not aromatic, but it is to my

senses positively disagreeable. In drying, it loses more in weight than any hay with which I am acquainted.

The tall meadow oat grass, (*avena elatior*), has proved under my cultivation, a most valuable grass, and has fully supported the high character given of it by E. Phinney, Esq. of Charlestown and Lexington. It is a very early, and a very tall grass, yielding a good burden. It will start as frequently and as rapidly after cutting as the orchard grass, and makes a sweeter hay. It has the advantage of being a perennial and enduring grass. On my first experiment, 20 years since, it lasted seven years without the necessity of renewal.

The sainfoin, a favorite grass of France, has never succeeded with me. I have made three trials of it, but in every case it perished the first winter, to such an extent as to render its culture impracticable. I have not heard of its success in any part of the northern states.

The lucerne grass I have now cultivated for eight years last past; having a full conviction that it is superior to the red clover, and that on soils adapted to it, it must and will supersede it almost entirely, except where the clover is intended merely as a preparation for wheat. I shall make some further remarks upon it, giving the results of my last years' experience, which both for their extent and success, far exceeded those of any former year.

My first piece, (four years from the seed), I reserved for soiling. It was cut down four times, and pastured the fifth. The first cutting was on the tenth of May.

The second piece was sown with red top, and was cut and made into hay three times, and depastured on the fourth. There was good feed of a fifth crop on Christmas day.

The third piece was sown with tall meadow oat grass, in the proportion of one bushel of oat grass to six pounds of lucerne.

The first crop was very great; it was difficult to decide in this first crop which excelled, the lucerne or the oat-grass. But in every succeeding crop, the lucerne predominated to so great a degree, that it seemed to be the only crop. This was owing

to the greater breadth of its leaves. I never cut it till it flowered. I made 4 crops last summer of excellent hay from it, amounting in all to six tons and a half per acre — and after that it furnished a rich supply of after feed. This crop was seen and admired by a great number of intelligent farmers.

Having been convinced that it was suited to my soil, I last year laid down an acre and a quarter for a pasture, being satisfied that it is admirably adapted for this purpose. I laid it down with barley, but it grew so fast that I was obliged to cut the barley stalks very short, or else I should not have been able to thresh it, so thick and succulent was the lucerne. I cut over this field once, and then depastured it.

I mention this fact as a remarkable one, because the French writers speak of it as a *very rare* occurrence, even in *their* climate, that it will bear the scythe the first year.

At the South and in New York, the lucerne has done as well as with me. Yet many persons have not succeeded with it here. It will not endure wet or black soils. The land in which I have raised it, is a warm soil — the surface good, but thin on a gravelly bottom. It has stood drought better than any other grass. I have always used gypsum, and perhaps owe my success in part to that valuable stimulant. I have employed two bushels to the acre. If my repeated experiments shall result in its successful culture, I shall be happy ; and if not, I shall have the consolation of well meant endeavors in a good cause.

Respectfully yours,

J. LOWELL.

BONE MANURE FOR WET MEADOWS.

To the Hon. Thomas L. Winthrop, President of the Massachusetts Society for the Promotion of Agriculture.]

SIR — It is well known to all readers of agricultural works that a vast variety of *substances* are used in older countries than ours (for the purpose of increasing the fertility of lands) which have been unknown to us. It is no reflection on our country, because we have not wanted them. The time has now arrived in Massachusetts at least, in which these treasures should not be lost. I beg leave to mention one, not of my own discovery, but to which I have been indebted to the sagacity, and liberal intelligence of my neighbor. A few years since, the Hon. William Ellis of Dedham, recommended to me the use of the head and feet bones of oxen as a highly valuable manure on meadow lands. He said that he had observed in passing that I had grounds remarkably well adapted for this manure. I however neglected his hint, though I constantly kept it in mind, until the last year, when seeing an immense load of the heads of oxen passing by, I inquired of the owner, for what purpose he was carting those materials, and his answer led me to the following facts, viz. That he came down a distance of eight miles with an empty team, and was carrying back a load, which cost him 2 dollars, to put on his meadow land. I found that it was no new experiment with him, and that he came often for this purpose.

Here then I had facts. I knew the habitual economy of our citizens, that they were not remarkably prone to idle experiments, or to wanton expenditure.

I entered with my very intelligent informer into many particulars as to the process and effects, but I own that I was more impressed with the simple fact, that he would devote his team and labor for a day and pay two dollars for his materials besides, than with all his other assertions:

If this man can afford to come 16 miles, and carry back a manure which costs him as much as a load of dung, surely it

must be more valuable to me, who can cart eight loads at the expense of his one.

I made the experiment. Its success surpassed all his descriptions. The manure brought in new grasses. It encouraged and invigorated the old.

I am aware that it is only of limited application, but it is no trifling thing to render useful an article formerly thrown away. We know so little of the philosophy of manures that I shall not speak on that subject. All I shall say is, that there is much animal matter still adhering to the bones, and animal matter has been found by experience to promote the growth of vegetables.

The mode of application is to break them up with a sledge, or with the back of an axe, and then to press them below the surface by a rammer or beetle. The *only* point to which I offer *my* testimony is, that the *effects are much greater* than an *equal quantity* of horse and cow-dung. This may be relied upon.

Very respectfully yours,

J. LOWELL.

GRAFTING THE GRAPE.

Much has been said in the Southern Journals about a recent discovery as to grafting the vine. It has been announced in such terms, as would lead ignorant persons to suppose, that to that person alone was the merit due.

I am induced to make great allowance for the habitual grandiloquence of our southern friends. They are very prone to use high *sounding* words. But in fact, horticulture was an advanced art in the North when it was unknown in the South, and but imperfectly so in the Middle States. It is equally true now. Massachusetts is far before New York and Pennsylvania in Horticulture, if you take into view the improved state of private gardens, the number of its green and grape houses, and the beauty of its country seats. There do not exist in the whole range of the United States more finely cultivated or highly

ornamented country residences than this ancient state can show.

But to the point of the grafting the grape. My excellent friend, the late Ebenezer Preble 20 years since grafted the vine with as much care as he grafted other plants, without grafting into the root. I have done it often, but with not so entire success. No doubt the grafting the root is more sure, but it does not apply to the grafting in vineries. There you need the skill which Mr Preble and the French gardeners possessed of grafting in the limbs.

A CULTIVATOR.

ROXBURY.

MILCH COWS.

The attention of farmers is invited to the consideration of the character and condition of our milch cows.

How much milk ought a cow to yield to be worth her keeping? What is the average time that our cows are in milk? Is there much, if any, waste of fodder among us by keeping animals that yield little or no return of profit? Questions like these, and there are many such, ought to be put and answered in the New England Farmer. It may turn out that our dairy stock is extremely low in character and its management wasteful.

If something like an average quality of milch cows could be settled — to afford a standard — and it should be understood that no good farmer would keep an animal for milk that fell below it; all the cows in the country would soon come up to that standard and go beyond it.

A milch cow, of *medium quality*, in this State, will give, it is supposed, 12 quarts of milk per day for 2 months after calving, and about 7 quarts per day on grass feed for the next four months, and 4 quarts per day for the next following 2 months, and perhaps 2 quarts one month longer. Altogether 1500 quarts in a year.

It takes 9 quarts of milk to give a pound of butter, and 4 quarts to yield a pound of cheese. The skim milk and dairy *whey* may be valued at \$3 a cow per annum.

Now, a cow that gives 1500 quarts of milk in a year will produce 166 lbs. of butter, worth at 16 cents per lb.	\$26 56
Skim milk, say	3 44
	<hr/>
	30 00

Or 1500 quarts of milk will give, at 4 quarts to the pound of cheese, 375 lbs. which at 8 cents per lb. will be	\$30 00
Whey, say	3 00
	<hr/>
	33 00

Nothing is said of the worth of the calf, as all the milk the cow gives is credited. A milch cow's keeping one year cannot be short of 25 dollars in the interior.

Suppose a farmer to resolve that he would keep no cow that did not hold out as a good milker 9 months in the year—and that did not give sixteen quarts of milk per day for 2 months after calving, and 12 quarts per day the next four months—and six quarts per day the next 3 months, and 2 quarts per day the month following. — Such a cow would yield per annum 3000 quarts of milk.

Here it may be remarked, that with the addition of 5 dollars per annum to the cost of food as estimated for a common cow, the neat profit would probably be four fold.

Is it not practicable to have throughout the country, as common dairy stock animals as good as the last described?

This question is submitted to farmers for consideration. The probability is, that in taking some pains to get stock as good, they would get even better.

If the various modes of obtaining this object were resorted to at once and with zeal throughout the country, there would be a prodigious improvement, in a very short time. — No young animal of promising appearance for milk would go to the butcher. — More care would be taken of young stock. — More young stock would be retained to insure a better selection for milch cows. — Farmers would think more of the advantages of em-

ploying bulls of the improved breeds. — Heifers would be milked with great care and very thoroughly to get them into the habit of holding out long as milkers. If they once dry early, no care and keeping afterwards will correct this fault. — Heifers with the first calf will be fed well and with some additional care the last 3 months they are in milk, to make them hold out.

The profit of a milch cow is not generally understood. Milk is not only the most nutritious but the cheapest article of food. The food necessary for a cow in full milk, does not exceed in price, one third of what is necessary in feeding for the butcher.

These few remarks are hastily made to draw out our farmers, and particularly scientific farmers, on this subject. There is a great deal to be said upon it, and a great many facts to the purpose, which should come to light.

PREMIUM LIST OF THE MASSACHUSETTS SOCIETY FOR
PROMOTING AGRICULTURE, FOR 1831.

In the period of 14 years, since the first Cattle Show at Brighton, several thousand dollars have been distributed in premiums to encourage improvement in the farming stock, — not without some success. It is believed that farmers generally, are convinced of the benefit of attention to the rules recommended by scientific men, in the selection of their stocks. The Shows of the county societies have already contributed greatly, and will continue to do much, to awaken attention to the advantage of raising prime cattle for labor, and for the dairy, and to secure a preference of the improved breeds of sheep and swine. And if there be any who still permit ordinary animals to consume the produce of their farms, there may be found examples enough in their neighborhood, of such as profit by a better husbandry, to convince them, ere long, of their error.

A state of things so favorable will justify the Trustees of the Massachusetts Agricultural Society in appropriating the money at their disposal, for premiums, the coming season, to some other objects. They will therefore intermit the Brighton Cattle Show for one year.

The general management of farms — the operations of the dairy — and a thorough field culture for vegetables and grain crops, will engage their attention, as leading objects ; and their largest premiums will be appropriated the ensuing season to encourage and reward distinguished merit in these particulars.

Butter and cheese are among the staples of New England, and it is obvious, that a small improvement in their quality will add a large sum of money to the income of this district of country. And there is every reason to hope, that a judicious encouragement by premiums, will, in a few years, give a character to our dairies, not surpassed by any part of the world. To accomplish this more surely, it may be of use to admit, for a time, a competition for our premiums, for butter and cheese, from beyond the limits of the state, and without any restriction as to their origin ; that, if practicable, we may have specimens to compare with our own, even from other countries. We may thus have an opportunity of attaining to a greater certainty the degree of excellence of which these important articles of food are susceptible, and, by the comparison, learn the imperfection of our own processes of manufacture — and perhaps we may have the satisfaction to find that, to some extent at least, both butter and cheese, are now made in Massachusetts, not inferior to the best in other countries.

Some premiums offered in past years for the encouragement of plantations of forest trees, live hedges, and apple orchards, and for useful experiments, and valuable inventions, will be continued.

In conformity with the views above expressed, the Trustees of the Massachusetts Society for Promoting Agriculture, propose

to have an Exhibition of Butter and Cheese, in Quincy Hall, in the new Market House, Boston, on Wednesday, the ~~eighth~~ 7 day of December, 1831.

And they offer the following premiums, to be awarded by a committee of competent judges, selected by the Board, to the proprietors of the best lots of Butter and Cheese exhibited, without regard to the place of manufacture.

For the best lot, in tubs, pots, or firkins, not less than 300 lbs. \$100 00

For the next best, not less than 300 lbs. 50 00

For the best, less than 300 lbs. and not less than 100 lbs. 30 00

For the next best, less than 300 lbs. and not less than 50 lbs. 20 00

For the best, less than 100 lbs. and not less than 50 lbs. 15 00

For the next best less than 100 lbs. and not less than 50 lbs. 10 00

For the best lot of Cheese, not less than one year old, and not less in quantity than 300 lbs. 100 00

For the next best, not less than one year old, and not less in quantity than 300 lbs. 50 00

For the best Cheese, less than one year old, and not less in quantity than 300 lbs. 50 00

For the next best, of not less quantity 30 00

VEGETABLE AND GRAIN CROPS.

For the greatest quantity of Carrots on an acre, not less than 600 bushels 20 00

For the greatest quantity of ditto on half an acre, not less than 300 bushels 10 00

For the greatest quantity of Potatoes on an acre, not less than 500 bushels 20 00

For the greatest quantity of ditto on half an acre, not less than 250 bushels 10 00

For the greatest quantity of common Beets on an acre, not less than 600 bushels	\$20 00
For the greatest quantity of ditto on half an acre, not less than 300 bushels	10 00
For the greatest quantity of <i>Mangel Wurtzel</i> , or Scarcity Root, on an acre, not less than 600 bushels	20 00
For the greatest quantity of ditto on half an acre, not less than 300 bushels	10 00
For the greatest quantity of Sugar Beets on an acre, not less than 600 bushels	20 00
For the greatest quantity of ditto on half an acre, not less than 300 bushels	10 00
For the greatest quantity of Parsnips on an acre, not less than 400 bushels	20 00
For the greatest quantity of ditto on half an acre, not less than 200 bushels	10 00
For the greatest quantity of Ruta Baga on an acre, not less than 600 bushels. . . .	20 00
For the greatest quantity of ditto on half an acre, not less than 300 bushels. . . .	10 00
For the greatest quantity of common Turnips on an acre, not less than 600 bushels	20 00
For the greatest quantity of ditto on half an acre, not less than 300 bushels. . . .	10 00
For the greatest quantity of Onions on an acre, not less than 600 bushels	20 00
For the greatest quantity of ditto on half an acre, not less than 300 bushels	10 00
For the greatest quantity of Cabbages on an acre, not less than 25 tons weight, free from earth when weighed	20 00
For the greatest quantity of ditto on half an acre, not less than 13 tons	10 00
For the greatest quantity of Vegetables (Grain, Peas, Beans, excepted) for home consumption and not for sale — raised for the keeping of stock, regard being	

had to the size of the farm in proportion to the crop, and to the number of the stock kept, — and also to the respective value of the vegetables as food, and the expense of raising the same . . . \$30 00

For the greatest quantity of Indian Corn on an acre, not less than 100 bushel . . . 20 00

For the greatest quantity of Winter Wheat on an acre, not less than 30 bushels . . . 20 00

For the greatest quantity of Barley on an acre, not less than 45 bushels . . . 20 00

For the greatest quantity of Rye on an acre, not less than 30 bushels . . . 20 00

For the greatest quantity of Millet on an acre, cut and cured for hay, not less than 3 tons; the claimant giving evidence of the time of sowing, the quantity of seed sown, and the quantity of hay produced . . . 20 00

For the greatest quantity of dry Peas on an acre, not less than 30 bushels . . . 20 00

For the greatest quantity of dry Beans on an acre, not less than 30 bushels . . . 20 00

For the greatest quantity of Mustard Seed, not less than 20 bushels . . . 20 00

For the greatest quantity of dressed Flax, not less than 500 lbs. from an acre . . . 20 00

For the greatest quantity and best quality of Hemp, on an acre . . . 40 00

It is to be understood that the quantity of land specified above is, in each case, to be in one piece. And the claimant of any of the above premiums shall, with one other person, make oath to the following particulars before some Justice of the Peace, and with a certificate of the same, shall obtain a certificate of the measurement of the land by some sworn surveyor.

The particulars are —

1. The condition of the land in the spring of 1831.

2. The product, and general state of cultivation and quality of manure used upon it the preceding year.

3. The quantity of manure the present season.

4. The quantity of seed used, and if potatoes, the sort.

5. The time and manner of sowing, weeding, and harvesting the crop, and the amount of the product ascertained by actual measurement, after the whole produce for which a premium is claimed, is harvested, and the entire expense of cultivation.

6. Of Indian corn — the entire crop of the acre offered for premium, if shelled, to be measured between the 15th of November, and the 1st of December. If not shelled, the whole to be weighed within the same dates, and 75 pounds of corn and cob, is to be considered as equivalent to one bushel of shelled corn.

7. At least 40 bushels of the vegetables, for which a premium is claimed (except potatoes, onions, and common turnips,) are to be weighed, and 56 pounds, from the dirt, will be considered as a bushel.

THE BEST CULTIVATED FARMS.

For the best cultivated Farm . . . \$100 00

For the next best cultivated Farm . . . 75 00

The farm to consist of not less than 70 acres, exclusive of woodland. The owner or tenant, to entitle himself to either of the premiums, must state in writing the nature and quality of the soil; the proportions suitable for tillage, mowing, and pasturing, respectively, and especially the quantity of irrigated meadow or low land which is never tilled or ploughed.

The number of acres planted the present year with corn, potatoes, and other vegetables.

The number sowed with winter and spring grains, and other vegetables, specifying the several kinds, and the number of acres planted or sown with each.

The quantity and kind of manure used for each crop, and the times and manner of applying it.

The quantity and quality of each crop.

The number of acres mowed the present year, specifying the proportion of irrigated meadow, or low land, and the proportion which had been ploughed or tilled, and the kind of grass and quantity of hay on each.

Manner of irrigating the lands, and dressing and manuring meadow or low land, and irrigated upland, if any, and laying down tilled land to grass.

The kinds of grass seed sown, the quantity of each, the time of year, and whether sown with oats, barley, or other grain, or alone.

The number of acres of pasture; the part, if any, that had previously been ploughed; when this part was laid down, and the kinds and quantities of grass seed sown per acre.

The number of apple trees on the farm; the proportion grafted; whether planted in orchards or partly by the fences against the road; the quantity of winter apples gathered and cider made; treatment of trees, and manner of making cider.

The form and dimensions of barns, sheds, and barnyard, and manner of collecting and making manure.

The number of oxen, cows, and young stock, horses, and sheep, kept on the farm through the year, and the quantity of butter and cheese made, distinguishing the new milk from the other cheese, and the breed of cows, whether foreign, mixed, or native.

The number of swine and quantity of pork made.

The labor employed in carrying on the farm, and quantity of ardent spirits consumed.

As it is deemed important to ascertain the best rotation of crops, it is expected that the applicants for these premiums will state the kind of crop, if not able to state the quantity, raised on the several and respective pieces of tillage, mowing, and pasture land described in their statements, for two years next preceding the present one.

The manner of feeding his stock in the winter season; whether he gives his milch cows or oxen grain or roots of any kind, and the kind and quantity.

His treatment of calves he intends to raise ; whether he lets them continue to suck, or weans them soon after born — how soon — what food he gives them, and how long he continues to feed them.

His manner of making cider and cleansing his old barrels, and the time he draws it off, if at all.

The kind of food given to his swine and the manner in which it is prepared.

The age at which he finds it most profitable to make beef of his working oxen and good milch cows.

If it be a sheep farm, the manner he treats his sheep in the winter ; whether they are housed or left out in the yard, the food given them, and the time they generally lamb.

The whole statement to be sworn to by the applicant. The Trustees to be at liberty, in all cases, before they award the premium, to visit by a committee, or such other persons as they shall appoint, the farms of the applicants, if they deem it expedient.

N. B. Claims to be addressed to Benjamin Guild, Esq. in Boston, (post paid) before the first day of October next.

EXPERIMENTS, DISCOVERIES, AND INVENTIONS.

For the experiment of turning in Green Crops as a manure, on a tract, not less than one acre, and proving its utility, giving a particular account in writing under oath of the process and the result . . . \$20 00

For the most successful use of the Drill Plough, in the cultivation of any small grains or seeds, on a scale of not less than one acre . . . 20 00

For an effectual and satisfactory mode of destroying the Bee-moth or of preventing its ravages . . . 20 00

For an effectual and satisfactory mode of extirpating the Worm that attacks the Locust tree . . . 100 00

For a new, effectual, and satisfactory mode of extirpating the Borer which attacks the apple tree . . . 50 00

For any newly invented Agricultural Implement, or Machine, superior to any designed for the same use, that shall have heretofore gained a premium, a reward not exceeding twenty dollars, according to the importance of the invention \$20 00

TREES AND LIVE HEDGES.

For the largest plantation of the White Mulberry tree, not less than two thousand plants, nor less than *three* years old, to be claimed on or before the 1st of December, 1832 50 00

For the greatest quantity of raw or unmanufactured Silk, not less than *ten* pounds, raised by the claimant, and presented before the 1st December, 1832 20 00

For the best plantation of White Oak trees, not less than one acre, nor fewer than 1000 trees per acre — raised from the acorn — not less than *three* years old, and which shall be in the most thriving state on the 1st September, 1832 100 00

For the best plantation of White Ash, Larch, or Yellow Locust trees, each of not less than one acre, nor fewer than 1000 trees per acre, to be raised from the seeds, and which trees not less than three years old, shall be in the most flourishing state on the 1st September, 1832 50 00

For the best Live Hedge, made either of white or Cockspur Thorn, planted after 1820, not less than one hundred rods, and which shall be in the most thriving state in 1831 50 00

For the best Buckthorn Hedge, not less than 100 rods, and which shall be in the most thriving state in 1831 50 00

For the best Apple Orchard planted since 1822, not less than 100 trees, and which has been managed, in all respects, with care and skill, and shall be in the most thriving condition in the season of 1831 50 00

Claims for the premiums on vegetable and grain crops, and experiments and inventions, together with the evidences required, are to be in writing, and sent free of expense, to Benjamin Guild, Esq., in Boston, Assistant Recording Secretary, on or before the 1st day of December next, and they will be examined by the committee, previous to the 7th day of December, on which day the premiums will be announced at Quincy Hall.

Competitors for the Butter and Cheese premiums will please to take notice, that there will be a public auction after the examination by the committee. There will be no charge for auctioneer's fees, but the government duty must be paid by the owners of the butter and cheese. The committee will be at liberty to withhold from the auction sale, any parcels, either of butter or cheese, which they may have reason to suppose, from the ordinary quality of the same, or other circumstances, may have been sent to the hall, *merely for sale*.

Claims for the premiums on Butter and Cheese must be made in writing, addressed to Benjamin Guild, Esq., Boston, post paid, on or before the 1st day of December, 1831. And the parcels deposited before Tuesday the 6th, at Quincy Hall, on which day, at 10 o'clock, A. M. the committee will examine the lots offered for premium, and none will be admitted after that hour.

Each lot must be marked with the initials of the owner's name, and the place of manufacture.

It is particularly recommended to the competitors, that the butter be put up in the nicest manner.

Agricultural Implements of new invention, intended for exhibition, must be sent to the Hall on or before Tuesday the 6th December.

R. SULLIVAN, E. H. DERBY, JOHN HEARD, Jr., GORHAM PARSONS,	}	Committee.
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BOSTON, JAN. 1831.